This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`

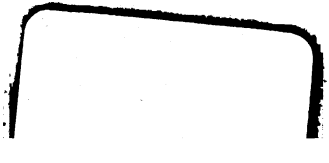
Educt
420
16.505

A MANUAL OF PHYSICAL TRAINING AND PREPARATORY MILITARY INSTRUCTION

KUENZLI AND PANZER

cT 429.16.505

Harvard College Library
THE GIFT OF
GINN AND COMPANY



3 2044 097 030 332

MANUAL OF PHYSICAL TRAINING AND PREPARATORY MILITARY INSTRUCTION

THE MACMILLAN COMPANY
NEW YORK · BOSTON · CHICAGO · DALLAS
ATLANTA · SAN FRANCISCO

MACMILLAN & CO., LIMITED
LONDON · BOMBAY · CALCUTTA
MELBOURNE

THE MACMILLAN CO. OF CANADA, LTD.
TORONTO

A Manual of Physical Training
AND
Preparatory Military Instruction

For Schools of the United States

A MODIFIED SWISS SYSTEM INTENDED TO PROVIDE FOR THE STRONG COMMON NATIONAL DEFENSE OF AMERICA

BY

FREDERICK A. KUENZLI

Assistant Appraiser Port of New York

Graduate of Teacher's College of Wettingen, Switzerland, and of the École Polytechnique Fédérale at Zurich, Switzerland
Formerly an Officer of the Swiss Army

AND

HENRY PANZER

Maitre de Gymnastique; Graduate of Berne, Switzerland; Grossherzog liche Turnlehrer-Bildungsanstalt, Karlsruhe, Germany; Baron Posse's Normal School of Gymnastics, Boston, Mass.; Member of Massachusetts Medical Gymnastic Association, 1904
Teacher of Swedish Gymnastics and Lecturer on Kinesiology at Chautauqua, N. Y., 1916

WITH ONE HUNDRED AND TWELVE ILLUSTRATIONS

New York
THE MACMILLAN COMPANY
1916

All rights reserved

EducT 429.16.505

HARVARD COLLEGE LIBRARY
GIFT OF
GINN & CO
MAY 23 1941

COPYRIGHT, 1916,
BY THE MACMILLAN COMPANY.

Set up and electrotyped. Published October, 1916.

Norwood Press
J. S. Cushing Co. — Berwick & Smith Co.
Norwood, Mass., U.S.A.

"The United States and Switzerland have common principles of life, common ideals and common aspirations."

— President WOODROW WILSON.

This Manual is Dedicated to

President WOODROW WILSON

GEORGE ALBACH, SR.

United States Senator GEORGE E. CHAMBERLAIN

Major General LEONARD WOOD

JOHN K. SAGUE, United States Appraiser
Port of New York

BY THE AUTHOR

FREDERICK A. KUENZLI

FOREWORD

THE NEW MANUAL OF PHYSICAL TRAINING. TENDENCY, CONDITIONS, AND PLAN

To understand this *Manual of Physical Training for Schools*, it is necessary first of all to come to a clear understanding of the *purposes* of *physical training*. Generally speaking, they are:

1. Health
2. Perfect bodily form
3. Dexterity
4. Forming of character

These objects — to form healthy, well-built, skilled, and strong-willed men — have always existed. In schools where these aims have been held, the beneficial effects on the physical development of the pupils, through the introduction of gymnastics into the curriculum, have been marked.

When gymnastics were introduced into the schools, instructions had to be extended to a multitude, *i.e.*, to a class or to combined classes. Pupils possessing varying degrees of physical ability had to be brought into common activity; and

exact and simultaneous performance and execution had to be attained throughout. This required first of all an abundance of material from which to select exercises.

Adolf Spiess, the founder of school gymnastics, pointed out the necessity for systematic development of the body. He was judicious in selecting from the domain of exercises all movements of the body and its parts. He increased the material available by using the simple exercises for combinations and transpositions.

A great number of exercises were to be performed first in standing position, from which resulted the complicated group of *free standing exercises ;* second, *the exercises of marching*, from which we finally received the endless chain of exercises in marching and orders ; and third, *the apparatus exercises.* Every position would form the basis for numerous exercises and games. The basic elements sometimes lead astray, often the wide-spread branches of the tree being mistaken for the trunk itself. Many teachers considered themselves competent to invent and arrange new forms as suited their individual fancy, and the vital consideration of the effects of the exercises on the human body was lost sight of.

The instruction in classes with its almost exclusive form of mass exercising, conceals in itself

a danger, *i.e.*, the general impression may become predominant at the cost of individual development, and spectacular form may be viewed more than the physiological effect.

The exterior form manifested itself in the marked movement of the limbs, which in relation to the few trunk movements were not generative, and gymnastics for the limbs was the outcome of such a system. Combined with all this was the disadvantage that important groups, natural forms of locomotion, especially the exercises of running in their simple forms, as well as in their application in the game, were neglected.

Thus the inner organs and their carrier, the trunk, were too little considered ; the gymnastic system consisted principally of strength and skill exercises, which required vast assistance from the mental system.

Too often the demands of æsthetics and ability were violated, and even to-day the over-estimation of exterior appearance and skill of voluntarily combined movements are leading gymnastics along the road of acrobatics. As a consequence, gymnastics lose their relation to nature.

Intelligent pupils of Spiess were readily convinced of the danger of elements so numerous, and began to sift them. Two questions arose :

1. Which are the most beneficial exercises?

2. To what ages are they suitable?

As experience had to be the guide, the men doing the sifting had to observe, discern, and experiment. The first work of this kind was performed in Basel, Switzerland, where the most prominent authorities of gymnastics, Alfred Maul, Frederick Iselin, and Wilhelm Jenny, toward the close of 1870, brought forth the first schedule for distributing the chosen material to the respective school years. This meritorious work influenced most favorably the instruction of gymnastics. It was carried out on the principle of Spiess' system. While it was not able to eliminate the deficiencies, it reduced them. *Physiology* took an effective part in the field of bodily exercises.

The advanced physiological knowledge furnished the means for sifting. It also demanded an increase of exercises of rapidity in preference to the prevailing exercises of force and skill. This claim was urged in a most forceable and convincing manner by Dr. F. A. Schmidt. In 1893 he published in Bonn, Germany: *Die Leibesübungen, ein Grundriss der Physiologie des Turnens* (The Bodily Exercises: Syllabus of Physiology relating to Gymnastics). In this book he carefully compared the effects of exercise, their muscular and nervous activity to the pulmonary and heart ·n, blood circulation, metabolism, and nutri-

tion, and demonstrated the *hygienic value of the exercises of rapidity and endurance.*

The Swedish system of gymnastics, which became gradually better known in our country, served us a model for trunk exercises. Instead of the prevailing general limb gymnastics appears the more profitable training of the trunk. The free standing exercises serve not only dexterity, but tend to give the body good health and correct posture. With the increased consideration for the functions of the internal organs, a careful consideration of the respiratory activity was logical.

Methodical gymnastics and games brought the bodily exercises from the room into the open air. The relations of man to nature manifested themselves physically in a series of motions, such as marching, running, jumping, lifting, pushing, throwing, pulling, drawing, climbing, swimming, etc. These forms and their complete mastering are the ultimate aim of physical training. The culture of those exercises is a direct, natural, and efficient way to stimulate the desired control of body.

In opposition to them are the abstract apparatus movements, the school forms, which constitute the means to the end. Moreover, there was another circumstance which urged the limitation,

and thus the careful selection of the school forms. The popular or athletic exercises require only modest apparatus or none at all, and they can be practiced almost anywhere and always.

The value of exercises of rapidity and endurance, and their relation to the development of the trunk and internal organs, is demonstrated in all forms of living in the open air. It became obvious that an increased appreciation of health and physical appearance had achieved more importance than mere dexterity. One did no more ask "What did the pupil learn to perform?" but rather "What became of him?" "How did we voluntarily influence his development?"

The interest in physical training has considerably grown within the last ten years. The general progress of technique and communications, the transition to routine handicraft, to factory and contract work, the agglomeration of people in the great centers of civilization and industry, brought important modifications in the conditions of life and laid a greater claim upon the mental system. The general hustling compelled the population at large to take a rational advantage of the possibility for a recreative living in compensation to the jeopardized health. Physical exercises began to attract more consideration, and this general tendency toward bodily exercises placed the question

of their execution into the foreground and led to lively discussions and striking modifications. These circumstances brought also more rapidly the demand for a new system of education.

The necessity of extending gymnastic training throughout the whole school time had been emphasized, from a pedagogical point of view, long ago. Philosophers and statisticians inform us of the unfavorable influence the school exerts upon the general health of the child ; how his body, especially in the first school years, is exposed to dangers through the habits common to school life, that is, the oppression of respiratory activity and blood circulation, and the deformation of the spinal column. Realizing this fact, the educational authorities of some of the states ordered the extension of gymnastic training and declared it compulsory.

The text of this Manual is enriched with illustrations. These have been inserted so as to combine word and picture for the purpose of more impressive demonstration. They are limited to Course II and III, and lastingly support the fact that the greatest importance lies in correct and positive position and movement.

After the table of contents follows a guidance for the teachers : *Discussion on the necessity of exercising ; suggestions on the selection and practice of*

gymnastics; effects of the exercises; plan of lessons; examples of lessons, and thus represents a concisely worded methodical instruction in which the gymnastic teacher will always find profitable references.

The exercises of marching, running, and order in Course II and III are taken from the *Infantry Drill Regulations of the United States Army,* and cover the whole schedule of the school of soldier, squad, and company without arms.

These exercises combined with a rational physical training according to our plan form the foundation of a common national defense. We believe that the boys educated along the lines of our system acquire physical fitness, obedience, discipline, self-control, uniform schooling, and will ultimately not need a long training to become good defenders of the Stars and Stripes.

The free standing exercises in these courses aim at ability, agility, smartness, and perfect bodily form.

The wand exercises contain only simple and effective forms. The description of these exercises has been adapted to the one of free standing exercises.

The exercises on apparatus are classified according to ages. The elements in general are limited; the selection has been from the elements

of gymnastics on apparatus in consideration of their physiological value. Exercises with definite acrobatic character were eliminated. *Climbing apparatus, horizontal bar, Swiss and Swedish boom, parallel bars, stall bars, and long bench are the apparatus used in our training. A special group of exercises of posture on apparatus will also be found.*

The popular or *athletic exercises* form a new group and have been arranged in courses, and not according to the age of the pupils. Our athletics also offer examples for competitive work, for arrangement of lessons of gymnastics in the country, and a chapter on *hikes* and two country games.

Spiess wanted to have the bodily exercises practiced in the sense of an essential education of the youthful body to a strong, not easily discouraged, always ready tool of the spirit that inhabits it.

Our ultimate aim is to give the boy a healthy, hardened body, a bright and courageous mind, qualities that enable him to become a good citizen and a well-fitted defender of the State.

The objects of gymnastics in particular are

1. In the physical field :

(*a*) General promotion of health and endurance,

(*b*) Habits of fine deportment and movement,

(*c*) Production of dexterity, ability, constancy, and rapidity,

gymnastics; effects of the exercises; plan of lessons; examples of lessons, and thus represents a concisely worded methodical instruction in which the gymnastic teacher will always find profitable references.

The exercises of marching, running, and order in Course II and III are taken from the *Infantry Drill Regulations of the United States Army,* and cover the whole schedule of the school of soldier, squad, and company without arms.

These exercises combined with a rational physical training according to our plan form the foundation of a common national defense. We believe that the boys educated along the lines of our system acquire physical fitness, obedience, discipline, self-control, uniform schooling, and will ultimately not need a long training to become good defenders of the Stars and Stripes.

The free standing exercises in these courses aim at ability, agility, smartness, and perfect bodily form.

The wand exercises contain only simple and effective forms. The description of these exercises has been adapted to the one of free standing exercises.

The exercises on apparatus are classified according to ages. The elements in general are limited; the selection has been from the elements

ıs region ; likewise the number of pupils to be structed simultaneously.

In 1903 the Federal Council of Switzerland, ırough the appointment of a commission consist-g of twelve *Maîtres de Gymnastique*, M.G. (mas-ers of gymnastics) and one representative of the Iilitary Department, ordered an investigation of ıe Swiss system of gymnastics which had been ompulsory in all the schools since 1874. The)epartment of Education had, up till that time, ıublished two manuals, one in 1876 and the other n 1898.

The work of the commission extended itself to tudying the two principal systems of gymnastics, he German and the Swedish. After nine years of investigation the government published the lat-est manual in the German language in 1912, in French in 1914, and in Italian in 1915.

The chief aim of the Swiss system of physical training is to train classes, teams, — large groups of boys, — so as to implant a coöperative spirit, a spirit of " one for all, and all for one." Every boy in a team is made to feel that if he fails in the performance, the work of the whole falls behind. The Swiss knows that only the strictest discipline and precise coöperation of every member of a gymnastic section leads to success.

He regards his country, the republic, as a big

team, the welfare of which depends on the spirit of organization and coöperation that lives in the individual citizen. A state can only succeed if every member is fit to do his part for the good of the whole, and if every citizen realizes that his own ultimate success depends on that of his neighbor. The Swiss system of physical training inculcates democracy, and teaches the benefit of system, organization, and a definite purpose to the social, political, and business units of citizenship.

It would be absurd to say that the Swiss system fosters a spirit of militarism. Where is there a purer type of republican ideals and a more fixed and devoted adherence to those ideals than in Switzerland? Has not Switzerland maintained for six hundred and twenty-five years an orderly form of self-government and, above all, has not a peaceable mind prevented the furies of war which are raging around her whole frontier from embroiling the strong and prepared nation of the Alps?

Our Manual is a modification of the Swiss system to meet American conditions, for we are convinced that to a great part the same cosmopolitan conditions exist in America as in Switzerland; and, therefore, that our system is most suitable to this country.

It comprises also the best elements of Ger-

man and Swedish gymnastics; and, in addition, has the necessary exercises of athletics, games, and military preparatory exercises. It is the well-weighed result of hard work.

NEW YORK CITY,
July 4, 1916.

TABLE OF CONTENTS

PAGE

I. PHYSICAL TRAINING FROM THE TIME OF ENTERING SCHOOL UNTIL THE AGE OF NINE. COURSE I.

A. Suggestions as to the selection and practice of gymnastic exercises 3

B. Examples of lessons 8

II. GYMNASTICS FOR PUPILS FROM THE TENTH TO THE FIFTEENTH YEAR. COURSES II AND III.

A. Selection of exercises as to their value . . 12

B. Elements of gymnastics 14

C. Selection and arrangement of the exercises for a lesson 34

D. Examples of lessons 41

COURSE I. PHYSICAL TRAINING FROM THE TIME OF ENTERING SCHOOL UP TO AND INCLUDING THE AGE OF NINE.

A. Marching and running 53

B. Free standing exercises 60

C. Exercises on and with hand apparatus . . . 65

D. Games and mimetic exercises 71

COURSE II. FOR PUPILS FROM THE TENTH TO THE TWELFTH YEAR.

A. Marching and running 77

B. Free standing exercises 88

C. Exercises on apparatus:

Climbing poles 112

Horizontal bar 115

PAGE

Swiss boom 123
Exercises of posture on apparatus . . . 125
Parallel bars 127
Stall bars 132
Long bench 137

D. Athletics:

Jumping 141
Running 146
Throwing 151
Pulling and pushing 154
Lifting 156
Climbing 157
Dry swimming 158

E. Games 162

COURSE III. FOR PUPILS FROM THE THIRTEENTH TO THE FIFTEENTH YEAR.

A. Marching and running 169
B. Free standing exercises 181
C. Wand exercises 197
D. Exercises on apparatus:

Climbing poles 212
Horizontal bar 215
Swiss boom 220
Exercises of posture 224
Parallel bars 226
Stall bars 231
Long bench 237

E. Athletics:

Jumping 242
Running 246
Throwing 248
Pulling and pushing 249
Lifting and throwing the weight . . . 251
Climbing: see Course II.
Examples for contests 252
Examples of lessons in the field . . . 253

PAGE

Hikes 255
Games in the field 256
Classification of exercises 261
Swimming 273

EXAMPLES OF LESSONS

COURSE I:

1. Thirty-minute lesson 8
2. Thirty-minute lesson 9
3. Sixty-minute lesson 10

COURSE II:

a. Example of lesson for pupils at their tenth year, at the beginning of the school year and under normal conditions 41

b. Example of lesson for combined class (age eleven to twelve years) according to a simplified plan for the rural district 43

c. Lesson without apparatus, with free-standing exercises in two groups, and athletic exercises; a lesson suitable for use in the open air (eleven to twelve years) 44

COURSE III:

d. Example of a lesson for boys (age fourteen) according to a normal plan in which the trunk movements are executed on the stall bars and long bench 46

e. Example of a lesson without apparatus, with reduced free-standing exercises (fourteen to fifteen years) suitable for the open air . . 49

INTRODUCTION

I. PHYSICAL TRAINING FROM THE TIME OF ENTERING SCHOOL UNTIL THE AGE OF NINE

COURSE I

A. SUGGESTIONS AS TO THE SELECTION AND PRACTICE OF GYMNASTIC EXERCISES

Practical physical training can only be understood by considering the physiological conditions of youth. The chief necessity for exercise by boys and girls from the age of seven to nine is to stimulate the development of lungs and heart. The lungs are strengthened and developed by deep breathing, the heart by repeated and more intensive activity of blood circulation. Both results will be obtained by rapid exercises ; this is why *running exercises* constitute one of the main features of gymnastic work. They are presented to the child in the most attractive form. At first, the greatest incitement to motion comes from the idea of playing ; afterwards, play itself best affords every child the amount of movement he requires. Besides the games, running exercises are performed

which are enjoyable to the child ; for example, movements from place to place which, instead of being well-defined maneuvers, are characterized by the greatest freedom of execution, and are in the nature of games to question the child's interest.

The running exercises are preceded by *marching exercises* which should not be unduly prolonged. The effects of running exercises are manifested by temporary fatigue of the organs of circulation, and should not, therefore, be practiced a long time, but rather alternated with relaxing exercises. *Free standing exercises* characterized by dexterity serve this purpose. They consist of exercises in imitation of the motions of workmen. The teacher will himself word the commands for these and other exercises here suitable, in accordance with the mental ability of the pupils. He will, thus, in time get nearer to the method of free standing exercises provided for Course II.

Systematic deep breathing will be performed in the most natural way when the children have a greater need of breathing, that is to say, after running. The teacher will then urge them to close their mouths, and after slow counting 1–2, let them inhale and exhale. In order to keep the desired time or measure, and arrange the exercises

more efficiently, it is advisable to combine arm raising sideward (sideward-upward ; forward-upward) with inhaling, and to let exhaling be followed by arm lowering. In general, inhaling should take place during those movements tending to expand the chest.

Besides the mentioned exercises there are jumping, long rope skipping, and ball exercises, as well as some lighter apparatus work to be considered. *Jumping* gives enjoyment to children and should, for this reason and for its practical value, be much practiced in an absolutely free manner.

The same applies to the exercises with *long skipping rope.* As skipping increases the breathing and circulation activities, so running under the rope swung headwards, develops intrepidity and a fixed purpose.

The throwing and catching of the small handball not only develops skill, but trains the eye to adjust itself to other distances than those to which the young child becomes accustomed in learning to read and write.

When gymnastic apparatus are available, the little pupils will be anxious to test their strength and dexterity on them. The child may be permitted to attempt a few very easy *apparatus exercises,* freely executed, and provided the requisite precautions be observed — strict

limitation to fall-hang positions and leaning-rest — and omission of exercises of plain hanging and resting.

In arranging the exercises for a lesson the teacher must not forget *that running exercises form the principal element of gymnastics and have to alternate* with others as needed, particularly free standing exercises.

On an average, *half of the gymnastic* time will be devoted *to games or game-like exercises;* yet no rigid time schedule can be laid down for any single lesson. All seasons, even winter, afford ample opportunity for gymnastics in the open air. *The hygienic welfare of the child demands that bodily exercises be taken out of doors as much as possible.* Games and game-like exercises can be performed in the open and will therefore predominate in such gymnastics.

If rain compels the exercises to be given indoors, or heat of the sun makes it necessary to seek a shady place, limited space will render quieter exercises advisable and the lighter games will furnish a welcome change.

While strenuous running games should not continue for long in hot weather, the pupils should be kept sufficiently active when temperature is low. When the first part of the lesson has already afforded active and strenuous running exercises,

the games to follow should be of a quieter nature.

It is advisable to select several games for each lesson in order to produce a required reciprocal compensation of movements.

If two lessons a week are prescribed for the gymnastics of Course I, it does not mean that the exercises have to last a whole hour ; it is preferable to divide the two hours into four half hour periods. The conclusion has been reached by authorities on the subject that the pupils need gymnastic instruction as near every day as practicable, and likewise that harmful results may attend a too protracted indulgence in such exercises. The half hour lesson should therefore be the rule, even though some of the exercises must be omitted each time.

A well arranged lesson begins with the less trying exercises, such as marching, which gradually take the body out of the state of rest to movement. Running exercises increase effort up to the middle of the lesson and are alternated with reposing exercises, the lesson concluding with a few games in which effort will diminish toward the end. (See the examples for Lessons I, II, and III, pages 8–11.) The teacher should be governed by consideration of his pupils rather than by literal following out of set rules.

If gymnastics in Course I are to bridge the transition from the free romping of infancy before school age and the restricted freedom of school days, they must not be tedious. The teacher must remember that the gymnastic lesson should be an hour of work softened by concessions to the playful spirit of childhood. Stiff formalism is the enemy of happy movement. Children do not come at first for the sake of going through definite exercises, but rather for animation and fun.

It is incumbent on the teacher to see to it that all exercises, especially those for deep breathing, should be taken exclusively in fresh air free from dust.

B. EXAMPLES OF LESSONS

A Thirty Minute Lesson

1. Marching in a serpentine line (short duration). Fall out and fall in on one side of the yard or hall.
2. All run to the opposite boundary (fence or wall), touching it and running back to the starting point. Repeat.
3. (*a*) Clapping hands 1 (2–3–4) times.
   (*b*) Clapping hands and folding on back, clapping and arms down.

4. Running first to the left, then to the right side (touching objects at every point), then to the fence and running back to the starting place.
5. Arms folded on the back, with inhaling.
   Arms folded on the chest, with exhaling.

For each exercise count four beats, and do the exercise six to eight times.

6. (*a*) Trunk bending forward with exhaling, and trunk stretching with inhaling.
   (*b*) Trunk bending backward with inhaling, and trunk stretching with exhaling.
7. Jumping (free style) over a cord which is held steadily at moderate height from the ground or floor.
8. Game: (*a*) The Black Man. (*b*) Jacob, Where Art Thou?

A Thirty Minute Lesson

1. Marching in circle, spiral, and again in circle.
2. Number by twos. Run all those numbered one to the left in circle. Run those numbered two in the same way. Repeat.
3. Hands joined, raising arms forward-upward with inhaling, and lowering arms with exhaling.

The duration of each exercise should be about four beats. Repeat from six to eight times.

4. As in 2 and 3, but running to the right.
5. Heel raising (knee bending).
6. Game: Catching.
7. Trunk bending sideways.
8. Handball. (*a*) Throwing with one hand and catching with both. (*b*) Bouncing on floor with one hand and catching with both.
9. Game: Cat and Mice.

A Sixty Minute Lesson

1. Marching in circles and center lines (short duration).
2. Fall in successively on the four sides of the place (all in animated fashion).
3. Arm raising forward-upward (inhaling). Arm lowering (exhaling). Repeat.
4. Marching in flank circle. On signal, the number ones run outside of the circle while the number twos remain in place. The number twos execute the same movement after the number ones have resumed their place.
5. Knee bending and stretching with arm raising and lowering sideways.
6. Game: Three Deep.
7. In the open front circle, hands on hips: Trunk twisting; same with arm raising sideways.
8. In front circle count off four, then all the ones race to the left around the circle, then to the

right. The same exercises are to be performed by the twos, threes, and fours.

9. Balance beams or reverse benches:
   (*a*) Balance walk over the bar (beam).
   (*b*) Running jump over the bar (beam).
10. Game: (*a*) Captain (divide large classes into several divisions). (*b*) Imitation game.

II. GYMNASTICS FOR PUPILS FROM THE TENTH TO THE FIFTEENTH YEAR

COURSES II AND III

A. SELECTION OF EXERCISES AS TO THEIR VALUE

The physiological conditions do not yet present any substantial differences from those of Course I. The most important need of exercise still consists in stimulating the development of the lungs and the heart. Running exercises in different forms retain their importance. They are supplemented by exercises which expand the chest and make the ribs flexible. Suitable for this purpose is a series of positions of the arms, trunk bending backward and *span-bending*, the latter particularly tending to lift and loosen the upper ribs.

Correct breathing is possible only with a flexible chest, and will best prevent the premature ossification of the costals and sutures between the sternum and the ribs.

After this age the *exterior* of the youthful body should be influenced to a certain extent. Gymnastic schooling must aim at a correct posture of

the body both in standing and walking. This is why all exercises gain a particular significance when they produce a reënforcement of the muscles of the back, the neck, the shoulders, and the abdomen. These exercises bear the general name of *exercises of posture*. They consist of exercises of the arms, trunk stooping (bending forward 45°), trunk turning and bending, exercises in leaning-rest position, and a number of exercises on apparatus. They form an indispensable element of gymnastics from a physiological standpoint.

To attain firm control of the body is likewise one of the aims of gymnastic instruction ; therefore exercises in dexterity should not be omitted. Skill in jumping is of importance. That is why jumping is in every lesson in gymnastics.

An important feature of gymnastic training is the development of courage, self reliance, and presence of mind. Exercises on apparatus, athletic exercises, and games are most likely to achieve this end. The former gain importance in Course III because the bony framework has become firm and the muscles have attained strength. Appropriate team games not only exercise the lungs and the heart, the eye and the hand, but promote sociability, coöperation, presence of mind, and resoluteness.

One may readily conclude from the foregoing

statements that the aims pursued in the gymnastic training of Courses II and III are somewhat more diverse than those of the first school years. Consequently, more abundant means towards those ends are necessary. Exercises performed in both of these courses are:

(*a*) Marching and running exercises.
(*b*) Free standing and wand exercises.
(*c*) Exercises on apparatus.
(*d*) Athletic exercises.
(*e*) Games.

B. ELEMENTS OF GYMNASTICS

(*a*) Marching and Running Exercises

The marching exercises are based upon the *Infantry Drill Regulations of the United States Army*. The running exercises keep their importance in Courses II and III. The necessary suggestions will be found in the description of the running exercises.

(*b*) Free Standing Exercises

1. *Object of the Free Standing Exercises and Principles of their Execution*

The free standing exercises comprise simple and combined movements of the different parts of

the body, as well as exercises tending to improve posture.

Free standing exercises form the basis of school gymnastics and should be especially considered in every lesson. On the part of the teacher they require a thorough understanding of the object of the movements and postures, besides a knowledge of the principles followed in their execution. Their main object is to make the body supple, to correct faulty posture, to increase the power of resistance, dexterity, and agility; to train the nervous system, as well as to strengthen the organs of circulation and breathing.

In the last-mentioned purpose are comprised, as indicated on pages 4–5, all the running exercises and free standing exercises pertaining to deep breathing or to the natural or the artificial breathing exercises. The latter become more important and consequently more prominent in the practice of gymnastics as the age of the pupil advances, his comprehension progresses, and his will strengthens. Deep breathing should be practiced when the expansion of the thorax has occurred through the execution of free standing exercises. Breathing must not be interrupted in the most strenuous part of the exercise, for to do so may also interrupt the heart action and injure the circulatory apparatus. Deep breathing should be ordered only by

rhythmic execution, and above all, done in four counts, *i.e.*, inhaling and exhaling each to the time of four steps.

There are two ways of executing the movements, a *quick way* and a *slow way*. The utmost effect of the exercises can be obtained only through careful consideration of the special rhythm of every movement. The movements which aim at velocity, dexterity, rapid decision, and increased blood circulation demand a quick execution. The exercises that tend to strengthen certain groups of muscles, for instance, those of the back, of the abdomen, or of the ribs, require a slow, but the longest possible, tension of execution.

Certain movements have to be slowly or quickly done, according to the end desired ; for example, stretching the arms, raising the knee, the leg, etc. In order to lessen the task of the teacher, all the movements to be executed *slowly* have been printed in this Manual of Gymnastics, in *bold-face type*.

The manner of performing combined exercises of arm or wand depends on the main exercise. The latter may be executed slowly, when in connection with leg or trunk exercises, although not printed in bold-face type.

The exercises of posture have to be taken exactly as prescribed, as faulty or careless postures increase the defects of the body instead of correcting them.

A perfect body depends not only on the development of the muscular system, but also on the right position of the various parts of the bony framework. In such position the legs are straight and firm-standing, the shoulder blades firmly attached to the thorax, the shoulders even, the abdomen drawn in, the thorax to be made convex as much as possible, and the position of the head erect and unaffected. This correct posture of the body can become a habit only when the highest efficiency is sought through flawless execution of all the exercises of posture and movement.

Special attention should be paid to exercises with trunk stooping forward; on account of their excellent influence on the stretching of the spinal column in the upper part, these exercises should be practiced in every lesson of gymnastics because they facilitate in the highest degree the contracting capacity of the back muscles. The frequent repetition of the exercises of trunk stooping is the more necessary because our exercises with apparatus, in general, influence more the abdominal than the back muscles.

In the free standing exercises all the parts of the body must be put into action. Thus, it is not sufficient to take in one lesson arm or leg exercises, and in another trunk exercises. *In order to obtain an efficient activity of the main muscular parts of the*

body, it is advisable to adopt the following method: In every gymnastic lesson free standing exercises will be taken twice and separated from each other by exercises on apparatus; first the plain or combined arm or leg exercises will be performed, afterwards the exercises of the trunk stooping (45°), *bending* (90°), *or turning will alternate or be combined with the free standing exercises above mentioned.*

2. *Exercising*

The free standing exercises of this Manual were selected, according to their value, from an almost inexhaustible abundance of movements. They must be thoroughly learned if their true benefit is to be attained. They will be least hampered if taken in open order.

Correct exercising should be introduced by exact *demonstration* and necessary *explanation* on the part of the teacher. Then follow the exercises *performed by the pupils and corrected* by the teacher. When demonstrating the exercises, and when observing the exercises of the pupils, the teacher has to select his standing point where he can see and be seen by all. Indoors, it will be best for him to stand in the prolongation of a diagonal; outdoors, at a sufficient distance from the center of the class. For the demonstration, the teacher will choose a place where the exercise he is showing may

be observed clearly. One time it will occur *in front position*, next time *in side position*. The execution of the exercises should be watched in the same way, while the teacher either changes his place or directs the children to face him.

The manner of correcting faults is of the utmost importance. If a fault is general, understanding will come through repeated demonstration and explanation. Corrections given in a *general form* are often worthless. They have even a harmful effect when the pupils are compelled, on that account, to remain too long in a strained position. Difficult exercises are best learned when the pupils are *divided into groups*, in which the non-participants will be interested critics. The exercises of the pupils after the teacher's demonstration must be repeated several times. Yet it is to be remembered that too frequent repetition of the same exercise renders the lesson *tedious*, *monotonous*, and *tiresome*, and kills the attraction of gymnastics. A new exercise cannot always be learned in one lesson. The pupils also will acquire endurance only through *gradual progression*, and it is a serious mistake when they are urged too soon to remain long in a fatiguing posture. Faults of this sort must be avoided for two reasons:

1. The desire of the pupils in exercising may be destroyed. 2. The position becomes incorrect.

The number of repetitions depends on the difficulty of the exercise and the importance of its effect. In the so-called exercises in four parts, the main value generally lies in the second and third movements. Instead of repeating all the four parts, it is advisable to have the second and third parts more frequently performed. The following examples bear out this view :

1. Arm raising forward, 2. **Change** to stretch-position, 3. **Change** to sideward position, 2. **Change** to stretch-position, 3. **Change** to sideward position, etc., 4. Arm lowering. Or 1. Jump to stride standing position, 2. **Knee bending** left, 3. **Knee stretching**, 2. **Knee bending** left, 3. **Knee stretching**, etc., 4. Jump to normal position. Or 1. Side step left, 2. **Trunk bending** left sideward, 3. Trunk stretching, 2. **Trunk bending** left sideward, 3. Trunk stretching, etc., 4. Closing step left.

The movements may be performed in different ways. After the exercise has been demonstrated and explained, the teacher gives a signal upon which the pupils begin to practice in a free manner, while the former pays full attention to the execution. Oftener movement after movement will first be indicated, then executed at the *word of command.* As soon as the movements are understood they do not need further description, but in order

to save time they should be executed upon the *calling out of a numeral.* Thus, an exercise upon command differs from an exercise upon *counting.* To those may also be added the exercises in *rhythm,* where one to four beat measure will be applied. *Rhythm will be used according to the nature of the exercises and must not influence their correct execution.* Rapid movements may each be performed in one count, but if they are executed in two, three, or four beat measure, they should be performed on the first of two, three, or four beats. Slow movements if executed in four, three, or two beat measure may occupy all the counts in their performance. In repetitions to rhythm, *no long series of exercises* should be arranged and gone through without interceptive commands.

3. *The Commands*

Since gymnastic exercises are taken as mass exercises, it will be necessary to secure homogeneity in the movements through the commands. Their nature and manner will influence in the utmost the execution of the exercises, so that this part of the gymnastic work deserves attention. The *preparatory commands* contain, in short and accurate form, the movements, that is to say, first the activities (*leg raising*) ; then, the indication

of the side of the body (*left*); and finally the direction in which the movements are to be made (*forward*). The teacher says "Leg raising left forward — trunk bending right sideways!" The command will be somewhat *drawn, very distinct,* and without any *too much vocal effort.*

After a pause, which lasts according to the time the pupils require for preparation, comes the *command of execution.* It consists of monosyllables, called "cues," mostly in the imperative form of the verb of command. For example: *Leg raising — Raise! Stretching — Stretch! Hopping — Hop!* etc. But in repetitions, numbers will be used: One! two! etc. If the preparatory command be expressed by a noun instead of a verb, the noun will then be used also as executive command; for example: *Jump* to stride-standing position — *Jump!*

By repetitions to measure, the *verb* or *noun* (as the case may be) is always used as an executive command and then time is marked by *two, three,* etc.

It is of advantage to express the executive command *briefly* and *sharply* for movements of rapid execution, and somewhat *drawn* for slow movements.

"It is not the volume, but the quality, of the voice which is necessary to successful instruction."

When the *preparatory command* has to be formed for combined exercises, *i.e.*, for movements to be executed simultaneously, the teacher will first call for the *main exercise* (leg — trunk movement), then the *added* exercise (arm movement), and combines both by the word " with." The verb, commanding the main movement, or a numeral will be employed as the executive command; for example, knee bending with arm raising sideways — *bend!* or — *one!* To indicate that the exercise has to be executed to the right, the teacher will add to the preceding execution to the left, the remark : *Same to the right,* or *reverse.* Thus he avoids repeating. Trunk turning left and right (alternately) means : Trunk turning left, trunk turning forward, then trunk turning right, trunk turning forward. In this case the retrogressive movements are not indicated. The same applies to execution to measure. For instance, trunk turning alternately in three counts — turn ! **1–2–3–4–5–6** ! This exercise will last till the teacher commands *Halt!* which is best given with the retrogressive movement, that is to say, instead of count 4.

With the use of beat measure it is advisable to employ always the same numeral with the same movement. For instance, arm raising forward to rhythm — Raise **1–2**, **1–2**, etc. Same in two

counts — Raise **1–2**, **3–4**, **1–2**, etc. Same in four counts — Raise **1–2–3–4**, **5–6–7–8**, **1–2–3–4**, etc.

The interval between the executive command and the beginning of the movement — the reaction time — will gradually be shortened through exercising. The command, *As you were*, compels the pupil to resume the position he previously had ; the teacher also uses this call to revoke an order.

(*c*) Exercises on Apparatus

1. *Object*

The exercises on apparatus serve to strengthen and develop important groups of muscles, and to promote alertness, dexterity, determination, and courage. The pupils generally show more interest in this work than in free standing or wand exercises, because they notice sooner an improvement in themselves and in the others, and because each one has an individual opportunity to distinguish himself. Exercising with apparatus promotes, therefore, the greatest desire for gymnastics on the part of the pupils.

Among pieces of apparatus for supporting, the following are considered : Parallel bars and horse, or boom with or without saddle ; and among apparatus for hanging positions : Climbing apparatus and horizontal bar.

The material has been considerably increased by the adoption of exercises on the stall bars and the bench, and the combination of both. These exercises possess the distinction of being rather free standing exercises than pure apparatus work, as they are usually understood. Their effects prove the positive advantage of this increase of material.

2. *The Lining-up of the Practicing Pupils*

The pupils have to be lined up so that the teacher can keep them all in view and so that they, in turn, can observe the practicing pupils. Therefore, it is desirable to place them in a front line which, under certain circumstances, may be drawn into a curve.

Fall in and fall out, *i.e.*, change of place for the apparatus, must be performed rapidly, and in good order. One must, therefore, avoid lining the pupils up too far from the apparatus, as well as wasting time in changing place. For the sake of keeping good order, the falling-in and falling-out pupils will have to make way for each other.

3. *Exercising*

Exercising in a free manner is used with greatest advantage in gymnastics on apparatus. Once the exercises have been demonstrated, the pupils proceed one after the other in a previously arranged

order to the apparatus, perform the demonstrated exercise once or several times, and go back to their places. In order to save time, the next in line begins immediately to exercise. Meanwhile the teacher observes, corrects, and helps ; and in this, when the groups are large, he may have the most advanced pupils to assist him. When the movements are finally learned, the exercises will also be taken by counting, *i.e.*, at command. A number of these exercises are suitable for a rhythmic performance. This most perfect form, which pleases the eye in the highest degree and requires the greatest physical control, can only be applied when the detailed movements have been sufficiently learned.

Longer series of movements cannot be taught to the pupil by a single lesson or demonstration. It is best to start with the preliminary movements and to add, little by little, in repeating, the remaining parts of the exercise. Naturally, we are dealing here only with well-learned movements for which the difficulty lies in a fluent performance and not in the execution of the detailed elements.

The way the teacher helps or is helped in the exercises is important. First of all, timid or weak children are to be given special attention. Great care should always be used as imprudence, temer-

ity, weakness, and timidity on the part of the pupils may lead to accidents which the teacher can prevent through careful regulations.

4. *Naming of the Exercises*

The following will assist in understanding technical terms :

If the line from shoulder to shoulder of the pupil is parallel to the longest line of the apparatus, the pupil will find himself in lateral or *side-stand, side-mount, side-rest,* or *side-hang position.* In cross position (*cross-mount, cross-rest, cross-hang*) the line of the shoulder of the pupil runs vertically to the longest line of the apparatus. When the pupil in side-standing position faces the apparatus, he finds himself in side-stand position *forward ;* 180° turn will place him into side-stand position *backward.* In the same sense we also speak of fall-hang position forward and rest backward, where as in the *side*-fall-hang position the narrow side of the body is turned toward the apparatus.

The *rest* and *suspension* (*hang*) can be executed with stretched or bent arms, as can the swinging. Where in an exercise we speak of *rest* and of *hang,* it is always understood to rest and to hang with stretched arms. The same applies to *swinging forward* and *backward,* — fore-swing and rear-swing with stretched (extended) arms. On the

parallel-bars swinging always begins, with few exceptions, from the cross-standing position.

In the naming (terminology) of apparatus exercises, we followed principally the *Manual of Physical Training for the United States Army* not only for the reason that, as a publication of the War Department, it makes the terms uniform wherever the Stars and Stripes float, but also, because we consider them to be far superior to anything published by private persons or associations.

The jump which is usually necessary in order to get into the rest or suspension is not mentioned in announcing the exercise. Thus, " suspension on two poles " is synonymous with " jump to stretch-hanging on two poles." While on the parallel bars, side-rest and cross-rest are to be differentiated, the Manual uses only the word " rest " in exercises on the horizontal bar, boom, and the horse. If we designate the side-standing position as the commencing position, the expressions " hang" and " rest" always mean side-hang and side-rest.

Positions into which an exercise leads are not mentioned ; as a matter of course the exercise " circle to rest " (bar or boom) is leading to side-rest forward. After an upward jump to suspensions or rest, there will always follow a jump downward either immediately or after other parts of the exercise. This downward jump will not be specially mentioned if it is not combined with

another exercise, for instance with a facing (rotation). It is also omitted to indicate the movement which is leading back to the starting position, if it appears that this movement is a retrogressive one. For instance, leg-raising instead of leg-raising and lowering ; arm-bending instead of arm-bending and stretching, etc.

An *intermediate jump* (inter-jump) means a downward jump with immediate following upward jump. An *intermediate swinging* (inter-swing) is a pendulum swing, *i.e.*, one swing to and fro.

Meaning of the expression *trunk lowering backward* (in side-mount) : a rotation of the straight upper body in the hip joint until it is straightened (Fig. 42, p. 129). In the *trunk lowering forward* (in side or cross-standing position, side-rest and straddle-mount) the hip joint remains straight and the whole body takes a more or less inclined attitude (Fig. 39, p. 128). The retrogressive movement is named *trunk raising.* A trunk lowering becomes a trunk flexion as soon as the spinal column bends.

5. *Command*

As said, it is best to have the exercises learned in a free manner. When the exercises are to be taken upon command, it is done by calling out a numeral. By performing exercises in rhythm a

beat must be selected that will correspond with the swinging of the moving body, since the practicing pupil can here neither slacken nor perceptibly accelerate the movement. For the execution of competing exercises, the best appropriate preparatory command is *Ready-set!* and the command of execution *Go!*

6. *Upward and Downward Jumping*

Not only the regular jumping from the standing position, but also jumping to rest or suspension on apparatus has to start with a *knee bending* and be accompanied with an energetic arm swinging, if the hands have not previously grasped a hold.

Every downward jump, even when occurring from a small height, should end with an elastic knee bending and stretching, and this way of performing should become a habit with the pupils. In order to reach this aim, the pupils should execute the downward jumps — into knee bending with arms forward or sideways, and the following stretching — at a special command.

(*d*) Athletic Exercises

Among such exercises the school of gymnastics considers jumping, running, throwing, pulling and pushing, lifting, climbing, and swimming. As the majority of these exercises can be taken without

any particular preparation, they are especially suited to localities where there is an incomplete outfit of artificial apparatus. This does not mean that they should take place exclusively there. The athletic instruction and exercises should take place just as well where a sufficient supply of apparatus is available. These athletic exercises have to be supplemented, under all circumstances, by exercises executed upon command, especially marching and free standing exercises. This is the only combination through which physical training will attain the best results. In any case the athletic exercises allow particularly the organization of competitive work. In the execution of competitive exercises it is to be remembered that they require a good deal of time. Therefore, the teacher must arrange his program with a thought to the greatest possible saving of time ; and it is understood also that all exercises should not be competitive. Before undertaking competition exercises a certain ability must naturally have been acquired.

(*e*) Games

The games of this Manual aim principally to develop the lungs and the heart. Entire freedom in their practice will afford enjoyment to the children, and the numerous changes between rest and

movement will obviate the danger of over exertion. The heart is stimulated in its action by running and keeps this increased activity for some time, even after the pupil has ceased to move. Since the running is constantly repeated after short intervals, it happens that throughout the whole practice of motion games the activity of the heart, increased to harmless limits, will stimulate the normal growth of the organ as well as the nutrition of the entire youthful body.

Games are an advantage also in the educational training of a child. They develop coöperation, alertness, and presence of mind, and increase resoluteness. Gymnastics when performed upon command only, are not likely to produce these effects.

When real benefit is expected from the practice of a game, it must contain the following principal elements :

1. The game must admit as many children as possible.
2. The game must offer general, lively movements.
3. Pupils should not remain inactive on account of the rules of the game.
4. Whenever possible the game should be played out of doors.

Nothing is more tiresome for the pupils than to realize that a game does not progress as it should. Naturally, every pupil ought to know the rules of the games. The teacher will teach as many of

these rules as is necessary for the beginning of the game in its simplest form. Then he will add little by little the remaining ones, so that the pupil learns, while *playing*, all the rules of the game.

There is a series of games which require particular skill and practice, for instance, batting the ball, throwing, catching, hitting, etc.[1]

The games become more attractive when the teacher participates in them. Of course, the rules of the games should be strictly adhered to above all others, by the teacher. Even if he does not play, he must witness the game. He has to watch the players and prevent any of the children from over exertion, and indolent pupils from trying to escape the strain of the game. He is also the umpire in any dispute and has, as such, to follow the course of the game and know the subject of the controversy. Only when he carefully follows the game can he check roughness in word or deed. When the pupil has learned, even in the animation and excitement of the struggle for winning, to show self-control the game has then fulfilled its educational purpose.

[1] For an abundance of suitable games see Bancroft's *Games for the Playground, Home, School, and Gymnasium.*

C. SELECTION AND ARRANGEMENT OF THE EXERCISES FOR A LESSON

If the aims referred to in the preceding paragraphs are to be attained, it will be necessary to select the exercises in accordance with their practical value. Consequently, there is the absolute necessity that every teacher be acquainted with the general effects of the exercises and have them performed according to the needs existing at the time.

Granted a correct selection of exercises, it will still matter in what succession they have been arranged for the lesson. One should never begin the lesson with the most exerting and violent movements, but have these performed toward the middle of the lesson.

The pupils, in most cases, come to gymnastics after studying, that is to say, after being seated for a considerable time. Therefore, it is not right to occupy them with exercises in place. But the teacher will meet their desire for action by letting them march and run without allowing either long duration or great rapidity to predominate. Then he will proceed to the first part of the free standing exercises. Before taking them, it will be advisable to perform a few brisk movements, especially of

the legs, in order to stimulate the circulation of the blood. Then should follow some exercises for the improvement of posture, preferably arm movements, which can be easily combined with breathing exercises. Single leg exercises, or in combination with arm exercises, and positions of equilibrium will close the first part of these standing exercises.

The second part of the lesson consists of light exercises on apparatus.

In the third part we have again free standing exercises which have an intensive effect upon the muscles of the back, the shoulder, the neck, the abdomen, and the sides. Between these special trunk exercises, alternating leg exercises will give variety and diversion, and the first part of the free standing exercises will best answer this purpose. If no rope-jumping exercises follow, it will be desirable to take different jumping exercises which allow the greatest amount of activity in the shortest possible time. Breathing exercises ought to follow vigorous exercises. After this, running in any convenient form, as endurance run, dash, or motion game, is opportune, and should be followed by additional breathing exercises.

Instead of the second free standing exercises, some exercises on the stall-bars or the bench, or on apparatus raised to the height of the knee or hip, may be executed. By this arrangement,

we know that a careful selection of movements on one part, and a simultaneous activity of the largest possible number of pupils on the other, produce the desired effects upon the muscles of the back, shoulder, neck, abdomen, and sides.

In the fourth part either exercises on apparatus, rope-jumping, or clearing obstacles will be taken up again ; these exercises on apparatus are more fatiguing than the first ones and complement them, as they do not act upon the same muscular parts.

The lesson will conclude with a motion game, provided such has not been executed among the running exercises.

For a lesson as described above, the best program is the following :

I. (*a*) Marching and short running exercises.
(*b*) Free standing exercises (arm and leg exercises).

II. Light exercises on apparatus.

III. (*a*) Free standing exercises (leg and trunk posture exercises) and, eventually, jumping exercises.
(*b*) Running exercises.
(*c*) Breathing exercises while marching or standing.

IV. Heavier exercises on apparatus or jumping and other athletic exercises.

V. Motion games and breathing exercises.

We must not forget that the carrying out of such a substantial lesson requires not only thorough ability of teaching, but also favorable conditions. In view of this, the number of pupils must be limited and a sufficient supply of apparatus provided for. It often happens that the time assigned to these exercises is exceeded and thus the other parts of the lesson receive less attention.

The lesson must be conducted with regard to the time available. If the period is short, the free standing exercises will have to be condensed into one part, and particular consideration given to the group of exercises of posture. In order to save time, and yet to work efficiently, the same group of exercises will be practiced somewhat longer. Following this, gymnastics on apparatus will take place; then, running and jumping, athletic exercises, and finally, motion games. Conditions will often eliminate the latter. If only a few minutes are left at the end of a gymnastic lesson, it is not worth while commencing a game. In such a case it is advisable to reserve a quarter of an hour for games during the next lesson.

Occasionally only free standing exercises, jumping, or exercises on apparatus may be performed and immediately afterwards games taken up. Sometimes a whole lesson may be devoted to games, or athletics, or bathing, or, in winter

time, to the practice of skating and sleighing. Too much time should not be devoted exclusively to seasonable sports. Proper physical training demands a systematic effect upon the young body and for this reason a regulated gymnastic training is indispensable. Besides this, it is desirable to devote special hours, half days, or evenings to games.

In localities where an appropriate gymnasium cannot be secured, it is well nevertheless to practice physical training as much as possible throughout the year. For gymnastics in cool weather, the exercises should be energetic, alternating with quieter ones only as a means of resting. The children should not remain too long in an inactive position. Inhaling, as well as exhaling, should always be through the nostrils. Thus, the fresh, inflowing air is warmed and purified; and, since the outflowing warm air is carried again to the cooled off mucous membranes, the pupil protects himself from colds.

Naturally, it is not necessary, under these circumstances, to devote regularly a whole hour to gymnastics. A quarter of an hour daily will give satisfactory results. First of all, free standing exercises which stimulate the blood circulation are to be considered. Then marching, running, climbing, and jumping may follow. The exercises

on apparatus are less advisable, because they compel pupils to stand idle. Skating, sleighing, and ski-running are recommended for the winter.

In preceding statement, we have not taken into consideration the different ways a gymnastic class may be arranged. The conditions are simplest when a class can be formed of pupils of the same age. In this case the selection and arrangement of exercises is easy. But if a gymnastic class comprises scholars of two, three, or even more different grades, the arrangement of a program is more difficult.

Of course marching and running exercises are suitable for all classes and may be repeated from year to year. The free standing exercises of a course are too numerous, and sometimes too difficult, to be all practiced by the younger pupils, or in one year. These facts show the necessity of selection.

At the beginning of each year the exercises to be practiced for some time must be selected from the schedule of the previous year. Only the main exercises should be selected. How long a time the teacher should devote to those exercises depends on various factors: one is the ages of the pupils composing the class ; another the rapidity with which the younger pupils accomplish the proposed task. After a time, the exercises may be taken

from those prescribed for the following year and then from the second year, when the class consists of at least three different subdivisions. It is not advisable to consider more years than this in the selection of work, even though one or two additional years are included in the gymnastic class.

The correct execution of the exercises should be the constant aim. It is more satisfactory to have the older pupils execute faultlessly some lighter exercises than to have them perform less successfully the harder ones, which the younger pupils find difficulty in learning. The effects of the exercises are best when the performance is perfect. It is absolutely wrong not to continue practicing the exercises already learned, for we finally gain through their repeated execution a real advantage in physical training, *i.e.*, an increase in power, which also means improving courage, confidence, and resolution. The presentation of a great number of free standing exercises does not mean that all the exercises must be *learned.*

Exercises on apparatus should be adapted to the age of the pupils. When four or five different years are put together, it is advisable to form three classes according to the standard of the pupils, one of beginners, one of medium, and one of the advanced pupils. Thus, the ele-

ments will be selected according to the ability of the pupils and not to the school-years, and in that manner it will be possible to do justice to all. Even with three classes the teacher has still sufficient preparatory work; he will not need to form four or five groups.

The remaining exercises do not require further remark. When we point out that the work should invariably begin in the simplest and easiest form, enough has been said.

D. EXAMPLES OF LESSONS[1]

(See program, page 36.)

(*a*) For Pupils at Their Tenth Year, at the Beginning of the School Year and under Normal Conditions[2]

I. (*a*) Squads right, stopping after the 90° turn. (Repeat.)

Marching in columns of squads.

(*b*) 1. Stride jumping (several times). 2. Arm

[1] Every exercise described left is repeated to the right. This expression *repeat* always relates to the part of the exercise near which it is placed. For instance, after arm bending, head turning, etc., it means that this part shall be executed several times before concluding the exercise. If not only a part but the whole exercise has to be repeated, then the *repeat* is placed after the description of the exercise.

[2] The exercises of marching and order for this grade are practiced with squads of single rank, consisting of four pupils.

raising sideward with respiration (counting four beats for each movement, raising and lowering). 3. Heel raising (toe standing). Knee bending and stretching (several times). 4. Heel raising with arm raising forward (four beats). 5. Leg raising left forward.

II. Horizontal bar (height of chest).

1. Jump forward to hang position — run back to side stand.

2. In the fall-hang position, release grip of left hand, turning 90° left. 3. Rest — jump down to deep knee bending position, stretching to normal position (repeat).

III. (*a*) In the stride-standing position : 1. Trunk stooping (45°). 2. Trunk bending forward (90°). As an inter-exercise take *stride-jumping* (see I, *b*). 3. Trunk turning to the left with head twisting. 4. Trunk bending left sideward. As an inter-exercise in normal position take heel raising and knee bending. 5. Trunk bending backward (arch flexion). 6. Trunk bending forward.

(*b*) Alternate *double time* (running) and *quick time* (marching) during 5 minutes (20 seconds double time (running), 40 seconds quick time (marching)). (Inhaling and exhaling each during four steps.)

IV. Jumping : Broad jump from given mark,

with about 12 yards starting run. Find out best jumpers in each group and then the best one among the selected ones.

V. Game : Three Deep.

(*b*) Examples of Lesson. Combined Class (Age 11 to 12 Years)

According to a Simplified Plan for the Rural District

I. (*a*) Facing 90° = Right, (left) face ! Count, off !

(*b*) During the march in front line : 1. ***Squad right***, (left), 2. ***MARCH***.

(*c*) 1. Twice heel raising and lowering and alternate leg flinging forward, 8 counts. 2. Arm bending upward to neck-rest position (repeat). 3. Fall-out position left sideward with arm bending upward. 4. Change of knee bending with arm stretching upward. 5. Change of trunk stooping (prone standing) and trunk bending forward (4 parts), then knee raising left, leg stretching left forward (4 parts). 6. Arm bending upward, trunk bending left sideways with arm stretching upward. 7. Arm raising sideways in ulnar position, trunk bending backward with arm bending to neck-rest position (4 parts).

(*d*) *Double time* (2 minutes), then quick time with inhaling and exhaling (4 steps each) (1 minute).

II. Climbing poles.
1. Jump to stretch-hang. 2. Climbing on one pole (free-style), at the reverse movement, *i.e.*, coming down the pole, insist that pupils lift the knees very high, so that the body glides downward as the hands travel hand under hand.

III. Jumping : Standing high jump 14 to 18 inches. Running high jump (22 to 28 inches, with about 10 yards starting run).
Running broad jump (5 to 7 feet, with about 12 yards run).

IV. Game : Ball in circle — *Passball.*

(*c*) LESSON WITHOUT APPARATUS, WITH FREE STANDING EXERCISES IN TWO GROUPS, AND ATHLETIC EXERCISES. A LESSON SUITABLE FOR USE IN THE OPEN AIR (11 TO 12 YEARS)

I. (*a*) During the marching, being in line : 1. ***Squad right,*** 2. ***MARCH,*** 3. ***Squad,*** 4. ***HALT.***
Alternate quick time and double time.
(*b*) 1. Alternate leg flinging forward. 2. Arm raising sideways in ulnar position and bend-

ing to neck-rest position (4 parts). 3. Front step left with arm raising forward, knee bending left with change of arms to upward (stretch) position (4 parts — counting 4 beats to each movement). 4. Deep knee bending, fall-out left sideward, closing-step left. 5. Leg raising left forward. Change to backward and forward position left (repeat).

II. Jumping : Standing broad and high jump. Running broad jump (obstacle). Deep jump (from an elevation).

III. (*a*) 1. Alternate trunk stooping and bending backward (4 parts), then alternate heel raising and deep knee bending (4 parts). 2. Alternate trunk bending sidewards (left and right) (4 parts), then alternate leg raising sidewards. 3. Front-step left and trunk turning to the left (repeat). 4. Alternate trunk bending backward and forward (4 parts), then alternate knee raising.

(*b*) Alternate 40 seconds double time with 20 seconds quick time during 5 minutes, followed by respiratory exercises.

IV. Throwing a small ball for distance (in several groups).

V. Tug of war, by pairs and groups.

VI. Game : Baseball.

(*d*) EXAMPLE FOR A LESSON FOR BOYS (AGE 14)

According to a Normal Plan in Which the Trunk Movements Are Executed on the Stall Bars and Long Bench

The exercises of marching and order for this grade are executed from double-rank formation, therefore, *a squad consists of eight pupils.*

I. (*a*) 1. Being in line, form column of squads: 1. ***Squad right, (left)***, 2. ***MARCH.*** 2. Being in column of squads, form line on right or left : 1. ***On right (left) into line***, 2. ***MARCH***, 3. ***Company***, 4. ***HALT***, 5. ***FRONT.***

(*b*) 1. Heel raising with wand raising forward upward (twice), then knee bending with wand raising forward (twice). 2. Wand raising forward upward. Change to position behind the neck (repeat). 3. Fall-out position left sideward with wand raising right upward. Change of knee bending with change of wand to opposite side (the *swing* carrying the wand through the starting position (4 parts). 4. Knee raising left with wand raising in front of shoulders. Leg stretching left forward with change of wand to upward position. Fall-out position left backward and change of wand to position behind the neck. Closing step left with wand lowering.

II. Horizontal bar. (Height of the head.)
1. Front-outer-knee-swing left and left leg swinging outward to rest position. Interjump and circle the bar to rest position, then leaping off with underswing. 2. Like Exercise 1, only using opposite leg. 3. From bent-knee-heel-balance-hang (heels touching rear of bar). Circle to rest position. Interswing to circle backward and jump backward to stand position.

III. (*a*) Either on stall bars :
1. In the span-bend position : Knee raising left (right) with toe-stand right. 2. Side standing backward, grasping with left foot ; fall-out right forward with arm raising forward upward. 3. In cross stand position : Arm raising sideward upward, trunk bending left sideward with grasp of bars at double arm's length (separating arms), leg flinging right sideways. 4. Backward hanging on the upper bar ; knee raising; leg stretching left forward ; same right forward and lowering. Jumping exercises in open order : Two succeeding jumps in place (leaping) with arm circling forward. Three steps run and jump forward with $\frac{1}{4}$ turn left, 4 times beginning with left foot, and 4 times beginning with right foot.

Or on the long bench :

1. In straddle mount position : Trunk circumduction to the left ; trunk stooping with arm bending upward. Arm stretching upward (repeat). 2. In stoop-fall position (front-leaning-rest) with support of hands on the floor: Raising left arm forward upward. 3. In forward lying position, the feet either below bar or firmly held by a companion : Stretching of the body with arm bending to neck-rest. 4. In sitting position, feet as in preceding exercise : Trunk lowering backward with arm bending. Arm stretching upward and immediately arm bending upward (repeat). 5. In side-fall position (side-leaning-rest) with support of right hand on floor and right foot on bench : Left leg sideways, raise ! Jumping exercises : Running high jump over two benches parallel to each other. Increase gradually the distance of the two benches.

(*b*) Potato race (use three balls).

IV. Parallel bars.

1. Swinging in rest with straddling at every second and third forward swing; rear swing to front-vault left. 2. Swinging in rest and at second rear swing front-leaning-rest; raising of left leg backward with

slight arm bending; swing forward to rear-vault left.

(*e*) EXAMPLE OF LESSON WITHOUT APPARATUS, WITH REDUCED FREE STANDING EXERCISES (14 TO 15 YEARS)

A Lesson Suitable for Use in the Open Air

I. (*a*) (Double rank.) Being in column of platoons or squads, to form line to the front: 1. ***Right front into line***, 2. ***MARCH***, 3. ***Company***, 4. ***HALT***, 5. ***FRONT***.

(*b*) 1. Leg swinging left forward and backward. 2. Trunk stoop standing with arm raising forward upward; arm circling backward and arm bending to neck-rest position; trunk stretching and fall-out left forward with arm stretching upward; closing step left with ¼ turn right and arm lowering sideward; repeat 3 times. 3. Side-step left with arm raising sideward upward; trunk turning left with trunk bending right sideward and arm bending to neck-rest position (4 parts). 4. In stoop-(prone) fall position (front-leaning-rest): Left leg backward, raise!

(*c*) 1. Racing in groups, picking winners, etc.
2. Throwing baseball for accuracy.
Throwing hurlball (in several groups).

3. Jumping: Running high and broad (clearing obstacles).
4. Tug of war.
5. Dodge ball.

COURSE I

PHYSICAL TRAINING FROM THE TIME OF ENTERING SCHOOL UP TO AND INCLUDING THE AGE OF NINE

COURSE I

A. MARCHING AND RUNNING

1. Forming the Front Line

The teacher commands: 1. ***To one rank.*** 2. ***FALL IN.***

The pupils take designated positions, side by side, the tallest one being on the extreme right of the line. The breaking of the front line follows at the command: ***FALL OUT.*** This exercise should be repeated several times and executed in lively fashion.

2. From the Front Line to Form the Front Circle Inwards, by Joining Hands

The teacher places himself facing the center of the front line. The pupils then join hands and bend the two wings right and left, forming a circle around him, the center pupil staying in place.

Repeat, changing from front line to front circle, first with, and then without joining hands.

3. Change from Front to Flank Line by Quarter Turn ; also Change from Front Line to Opposite Position by Half Turn (facing about)

To help the pupils in understanding the exercise, the teacher may command : Turn towards the door, towards the hedge, towards the parallel bar, towards the short or towards the tall guide. A quick execution is all that is needed and no other orders should be given.

4. From the Front Line Running to the Opposite Side of the Place, There Touching of the Hedge, or Wall, and Immediately Returning to the Starting Place

These movements can be executed first by half the class, then by the other half, and finally by the whole class.

5. Marching in Flank Line around Fixed Objects

Marching around trees, bushes, apparatus, etc., and pursuing different courses : Rectangle, long and short center line, countermarch, serpentines, etc. ; in all of which the teacher leads.

6. Forming the Column of Twos

Divide the front line into two equal parts. Let all make a quarter turn and march the rear half of the line alongside the front part. March the column of twos in different courses: Rectangle, circle, diagonal, separate the column of twos, countermarch the flank lines, and restore the column of twos.

7. Forming the Gate

The forming of the gate is to be practiced only as preliminary exercises for the arcade. The first pair in the column of twos face each other, join hands, raise the arms, and take a short backstep. A single pair forms a gate, several gates in succession, an arcade.

a. Marching through the gate and the arcade: While marching in column of twos, at a given signal the first pair forms the gate, and all march, one after another, through it and ahead; when the last pair has passed through the gate, the pair forming the gate joins the end of the column. At a further signal the second pair raises the arms to form the gate and the others march through it, and so on until all pairs in turn form the gate.

b. To form the arcade: The second pair, after marching through the gate formed by the first one,

takes position beside it, also forming a gate, and in the same way the third, fourth, fifth, and so on. After all have gone through, the last pair is at the head ; a repetition reëstablishes the former rotation.

8. Marching of the Flank Lines and in Column of Twos

a. March on the long center line of a rectangular course and at its end turn left and march ahead, following the boundary line until the starting point is reached. Continue the march on the long center line and at its end turn right and follow boundary line on the other half of rectangle.

9. Marching of the Column of Twos and in Separate Flank Lines

a. March the column of twos on the long center line to its end. Separate the two flank lines outwards, so that following the boundary lines and passing each other on the right, they meet at the original point of separation. Repeat this movement in opposite direction.

b. March the column of twos on the long center line to the center, then in separate flank lines outwards to the boundary line ; follow this line until

the lines meet and then as column of two on the long center line to the center ; separate the pairs and proceed as before.

10. Fall in to Front Line at Different Sides of the Place of Exercise

The side in which the pupils generally fall in is called the first side, the others the second, third, and fourth.

a. Fall in from the first to the second side.

The teacher directs the guide-right to the new place and has, by a given signal, for instance clapping hands, or by command, the whole class perform this change of place.

b. Fall in from the second to the third side.

c. Fall in from the third to the fourth side.

d. Fall in successively on the four sides in rotation, by the shortest way or by touching or circling around an object.

11. Running in Flank Circle

a. 1, 2, 3 times running in circle, one pupil back of the other.

b. After division in ones and twos the ones step outward and run, one following the other, in a circle ; the twos do the same. Then they reverse the running in opposite direction.

c. Marching in flank circle : At a given signal the ones step out, make a half turn, run once or twice around the circle, enter their places, and continue marching ; the twos do the same.

12. Running in Front and Flank Circles

a. In front circle inward : The ones run in circle to the left in back of the twos who stand in place ; then the twos in back of the ones who stand in place.

b. Marching in flank circle: At a given signal the ones step out and run in direction of the marching, around the circle of the twos who march ahead, and enter again their places ; then the twos step out and run in a similar way.

c. In flank circle (divided in ones to sixes) : All the ones make a side step outwards ; at a given signal the race of all the ones around the circle begins ; then all the twos follow and so on.

d. As in *c*, but every pupil overtaken by the one back of him steps out as conquered.

e. In front circle inward : Race, outside around the circle in the same direction, of one pair after another ; the one pair in one direction, the following in opposite direction.

f. In front circle outward, divided in ones to sixes : Race of all the ones to the left around the circle; then of all the twos, threes, and so on.

13. File-marching of Two Front Lines Standing Aside of One Another

a. The first line runs front way around the second.

b. The second line runs from the rear around the first.

c. As in *a* and *b* ; but reverse.

d. The second line runs front way around to the back of the first and back again ; then the first line to the back of the second and back again.

14. File-marching of Two Front Lines Standing Back of One Another

(*The Ones Back of the Twos*)

a. The second line runs to the right around the first.

b. The first line runs to the right around the second.

c. As in *a* and *b* ; but around to the left.

d. The first line runs to the left around to the back of the second ; then the second to the left around to the back of the first. Repeat, but around to the right. Each half of the first line runs outside around to the back of the second, also each half of the second outside around to the back of the first (and continued).

e. The second line runs right around to the left and aside of the first ; the first then runs around the back to the front of the second, then follows the alternate execution of this file-marching.

15. Forming the Marching Column

To move the pupils in an orderly way, for instance, to and from the place of exercise, the teacher forms the column of marching. This is performed according to the marching exercises of squads in Course III.

B. FREE STANDING EXERCISES

(*a*) Simple Arm Exercises

1. Clapping hands in front of chest with bent (stretched) arms.
*2. Fold arms in front of chest, and on back.
*3. Arm raising forward, sideward, forward-upward, sideward-upward.
4. Arms in forward, sideward, and upward position : rotating around the long axis, closing (to fist) and opening hands.
*5. Alternate arm raising forward and sideward, forward and upward, sideward and upward.

* Exercises marked with the asterisk are combined with exercise of breathing. They should be practiced only in good air (either in open air or rooms that are dust free).

*6. Arm raising sideward, palms of hands downward (dorsal position) : Arm bending forward until the finger points touch the shoulders.
7. Arm bending to hip-rest.
8. Reeling with bent arms in front of chest.
9. Arm stretching forward, sideward, upward.
*10. *Arm exercises for swimming :* Arms bent, elbows pushed back, hands between dorsal and ulnar position, touching each other with index finger.
Arms stretching forward with hand twisting to palms downward, moving arms through sideward-to-starting position.

(*b*) Foot and Leg Exercises

11. Closing and opening of feet.
*12. Heel raising.
13. Alternate heel raising and lowering.
14. Lower leg raising.
15. Knee raising.
*16. Knee bending.
17. Alternate knee bending and stretching.
18. Jumping in place, jumping forward. Jumping in place with a quarter turn.
19. Toe step forward (sideward, backward) (short step, planting slightly the ball of the foot).

*20. Short front or side-step : heel raising and alternate heel raising and lowering.
21. Leg raising forward, sideward, and backward.
22. Leg flinging forward, sideward, and backward.
23. Leg raising forward : Bending and stretching of the foot joint.
24. Jumping to stride position and back to normal position.
25. Front, side, and back-step (plant the whole sole of the foot).

(*c*) Head and Trunk Exercises

*26. Head turning.
*27. Head bending forward (backward).
*28. Trunk bending forward (sideward and backward).
*29. Trunk turning.

(*d*) Combined Exercises

30. Clapping hands once and folding arms in front of chest (on back).

31. Folding arms in front of chest then on back (repeat).

*32. With joined hands arm raising forward ; then upward (alternately, repeat).

33. Clapping, arm bending to hip-rest ; clapping and arm lowering (repeat).

*34. Arm raising forward and forward-upward (repeat).

35. Clapping and arm bending to hip-rest ; clapping and folding arms in front of chest (on back) ; clapping and arm lowering.

36. Four times clapping over head ; arm lowering (repeat).

37. Clapping and arm raising sideward ; clapping and arm lowering (repeat).

38. Arm raising sideward and sideward-upward; arm lowering (repeat).

39. Arm raising forward ; arm lowering and immediately arm folding on back (repeat).

40. Arm raising sideward ; arm lowering and immediate arm folding in front of chest; arm lowering (repeat).

(*e*) Examples of Successive Exercises and Combination of Exercises

41. Four times clapping and twice heel raising (repeat).

42. Four times clapping and twice knee bending (repeat).

43. Twice alternate heel raising and lowering, and twice alternate knee bending and stretching (repeat).

44. Twice alternate heel raising and lowering, and twice arm raising forward (sideward-upward) (repeat).

45. 1, 2, 3, 4 times jumping in place.

46. Hands in hip-rest : Twice alternate heel raising and lowering and alternate knee bending.

47. Hands in hip-rest : Twice alternate knee bending and stretching and alternate raising of lower leg.

*48. Arm raising forward-upward ; arm lowering and folding on back ; arm lowering.

49. Arm raising sideward ; four times clapping over head ; arm lowering to sideward position ; arm lowering.

*50. Arm raising forward ; change of sideward and forward position with arm rotating to palmar and ulnar position of hands.

*51. Arm raising sideward-upward; arm lowering and folding on back.

*52. Heel raising with arm raising forward (sideward, forward-upward, or sideward-upward) ; position with arm lowering. Alternate heel raising and lowering with arm raising forward (sideward, forward-upward, or sideward-upward).

*53. Knee bending with arm raising forward ; knee stretching with change to sideward position of arms ; knee bending with change to forward position of arms ; knee stretching with arm lowering.

*54. Knee bending with arm raising sideward, palmar position ; knee stretching with arm bend-

ing upward ; knee bending with arm stretching sideward ; knee stretching and arm lowering.

55. Twice arm raising forward (sideward) in change with four times jumping in place (hands either in hip-rest or folded on back).

56. Jumping to stride position with arm bending to hip-rest ; trunk bending backward ; trunk stretching ; jumping to position with arm lowering.

*57. Slow raising to toe stand and raising of the bent arms to swim position with deep inhaling ; slow lowering to position with circling swim movement and deep exhaling (repeat).

58. Alternate knee bending and stretching with arm stretching forward (sideward, upward).

*59. In stride position : Trunk turning with arm raising sideward.

C. EXERCISES ON AND WITH HAND APPARATUS

(*a*) Exercises with the Skipping Rope

The skipping rope should measure about seven yards, and have a loop on one end to fasten it to a fixed object (post, tree, or jumping stand). (There should be no hindrance to free passage around the fixed object.)

1. Distance of cord from ground 4–8 inches.

In marching the flank line or the column of twos : Step over the rope (held steadily).

2. In flank line or column of twos : March (run) under the rope, which is held steadily, chest high or shoulders high.
3. Jump with closed feet over the rope, which is held steadily and very low :
   (*a*) From position of attention.
   (*b*) With preceding jump in place.
   (*c*) With preceding jump forward.
4. Jump over the rope in free fashion.
5. Jump over the rope, which is held steady and low ; jump from one foot and land on the other.
6. Jump from both feet over the rope, which is held away in a short distance (preliminary to broad jump).
7. Broad jump with closed feet over two marked lines, which indicate the width of the jump ; also with preceding jump forward.
8. Broad jump with a short running start, jumping off from either foot, landing on both.
9. Running in free fashion under the rope, which turns headward, first by singles then by several pupils together ; also in orderly fashion after each third turn.

10. From side-stand : Jump over the rope, which is turned footward, 1, 2, 3, 4 times and then run ahead.
11. Running under the rope after each second turn, then after each first, by singles, then by several pupils together. The rope turns headward.
12. Running into the rope swinging footward ; skipping once or several times, then running ahead ; first by singles, then by pairs.

(*b*) Exercises with the Small Handball

The pupils practice first in free, unconstrained fashion, later in order and at command. Practicing in groups is advisable, either in open order or in several open circles. Every pupil should own a handball. The ball is thrown perpendicular. To obtain skill in catching with both hands, the pupil should be urged to a correct position of the hands. (Hands in height of face, roots of hands touching each other, back of one hand turned toward face.) A right throw is best executed with a step left forward (and reverse). In the beginning the throwing should be only to moderate height.

1. Throw with one hand and catch with both.
2. Bounce straight downward with one hand and catch with both.

3. Throw with one hand toward a wall and catch with both hands.
4. Practice this exercise also in throwing alternately with left and right hand.
5. Alternate throwing and catching between two pupils.
6. High throw with one hand; let the ball fall to the ground, catch the ball with both hands after bouncing the same with one hand.
7. Between two pupils at a distance of 5–7 steps: Throw with one hand to the partner, who catches the ball with both hands.
8. Bouncing to the ground; toss the ball, when coming back and reaching height of head, to the wall. Catch it.
9. Between two pupils: High throw and catch several times, then throw to partner, who catches with one or both hands.
10. Throwing with one hand to a fixed object (wall, trunk of tree, standing board, to drawn circles, targets). By gradual widening of distance to such objects a straight flight is to be aimed at.

(*c*) Exercises with the Wooden Hoop

(Common barrel hoops of a diameter of 20–24 inches, according to the height of the pupil, can be used.)

1. Place pupils in two front lines which face one another at a distance of 15–30 feet. In the front lines pupils keep a distance of one step : Throwing upward of the hoop and catching it in free, unconstrained fashion.
2. Throwing upward of the hoop with one hand and catching it with both hands.
3. Throwing upward of the hoop with the right and catching it with the left hand.
4. Rolling to the opposite comrade, who stops it (first in free fashion).
5. Rolling with one hand by one scholar to the opposite one, who catches it either with both or one hand.
6. Throwing and catching of the hoop from one to another, first in free fashion.
7. Throwing with one hand and catching with both or one hand.
8. From the forward position with moderately bent arms, the hoop held horizontally with both or one hand :
   (*a*) Raising the hoop over head, bring it down and out from under the feet.
   (*b*) Stepping through the hoop and raising it over head.
   (*c*) As in (*b*) but instead of stepping in with one foot after another, hop in it with one foot after another or with closed feet.

(The girls better practice these movements with the small jumping rope.)

(*d*) Exercises on Balance Beams or on Swiss Beam Lying on the Ground

1. Stepping forward to side stand ; jumping off forward.
2. Placing of one foot on the beam and jumping off forward.
3. Stepping over the beams placed in short distance of one another, first in free fashion, then with joined hands in front lines, with designating of the stepping foot.
4. From the cross-stand position beside or behind the beam : Stepping up and walking on the balance beam in free fashion, leaping off on the other end. Keep a good posture. If there are several beams on hand, place them at a distance of 24 inches from one another. Walking on the beams is performed with joined hands in height of shoulder.
5. With walking start (running start) : Momentary placing of the foot on beam and jumping over.
6. With walking start (running) and free take off : Jumping over the beam.
7. Walking on the beam with sideward position of the arms.

D. GAMES AND MIMETIC EXERCISES

(*a*) Imitating the Movements of Manual Workers

1. *Sawing wood :* These movements are executed as follows : The pupil places his left foot forward (short distance) with slightly bent left knee ; stretches his left arm obliquely downward (as if to hold a block of wood) and raises the bent right arm backward. Now the movement of sawing begins. It is continued stretching obliquely downward and bending of the right arm. The same movement with the left arm.
2. *Cutting wood :* Short step right forward, raise the two hands over the head so as to strike. Hands closed to fists, in ulnar position, one in front of the other ; strike hard forward. Repeat position to strike, and strike ; normal position and arms down. The same exercise with short step left forward.

   With these two exercises the teacher can easily find other suitable examples of manual work.

(*b*) Exercises of Observation and Reporting

The work of such game-like exercises is left entirely to the judgment of the teacher. They aim

to enliven the pupils, to further the ability to observe, to sharpen the eye, and to teach them how to report observations in a concise and clear way. *For instance:* The teacher orders one or more pupils to run to the street crossing, there to look around to see whether the dust is caused by an automobile, a team of horses, a group of soldiers, etc., and in what direction the team, or the group of soldiers, is moving ; or to run to a certain tree to find out what kind of fruit it is bearing ; or to read and keep in mind the number of a passing automobile, or the time at the tower clock. The observations made while executing any of these orders must be reported to the teacher in short and clear language.

(*c*) Running Games

1. *Contest of Driving the Hoop*

Use a hoop and a 12–15-inch long wooden stick. The pupils, two steps apart, in front line at one side of the ground. At a given signal of the teacher the driving begins ; the one reaching the goal first is the winner. (These exercises can be practiced competitively for smaller groups.) Roads and streets are suitable for practice of rows of two, three, or four pupils.

2. *The Hoop War*

The pupils face one another in equal groups. The distance between the two groups shall be as far as possible.

Driving toward one another begins at a given signal. The difficulty lies in passing each other in the attempt to reach the enemy's camp.

Each hoop knocked down by the hoop of the opponent is out of the game; but it is forbidden to knock the opponent's hoops down with hands or feet. It is practical to keep in good distance from one another so as to succeed better in driving the hoops into the enemy camp. The party succeeding in landing the most hoops in the other camp is the winner.

COURSE II

FOR PUPILS FROM THE TENTH TO THE TWELFTH YEAR

COURSE II

A. MARCHING AND RUNNING

Forming and Breaking of a Front Line

In Course II we call a squad a single rank of 4 pupils. Therefore, a class of 40 pupils represents 10 squads.

The squad proper consists of 8 pupils, that is 4 files. The school of squads in double rank will be taken up in Course III.

If several pupils are to be instructed simultaneously, they take at the command : 1. ***To single rank,*** 2. ***FALL IN,*** positions side by side according to their height from right to left. The tallest pupil places himself at the extreme right of the rank at a distance of 5–10 steps from the teacher, facing him. In rank each pupil places himself so that his right arm rests slightly against the arm of the pupil on his right. The ***FALL IN*** has to be executed as quick as possible (in double time).

At the command of ***FALL OUT*** the rank is broken.

[1] Taken from the *Infantry Drill Regulations of the United States Army.*

FALL IN and ***FALL OUT*** should be practiced extensively at the beginning.

In doing so the teacher must change his place often and choose it so that the pupils have to run quite a distance to reach their new ***FALL IN*** position.

Position of Attention

Command: ATTENTION.

At this command the pupil takes the posture shown in Figure 1.

FIG. 1.

Heels on the same line and as near each other as the conformation of the body permits.

Feet turned out equally and forming an angle of about 45°.

Knees straight without stiffness.

Hips level and drawn back slightly; body erect and resting equally on hips; chest lifted and arched; shoulders falling equally back without constraint.

Arms hanging naturally; hands with joined and slightly bent fingers leaning on the legs; thumb along the seam of the trousers.

Head erect and squarely to the front; chin drawn in so that the axis of the head and neck is vertical. Eyes straight to the front. Weight of the body resting equally upon the heels and balls of the feet. Preserve absolute immobility.

The Rests

Being at a halt, the commands are: ***FALL OUT; REST;*** and ***AT EASE.***

At the command ***FALL OUT,*** the pupils may leave the ranks, but are required to remain in the immediate vicinity. They resume their former places of attention at the command ***FALL IN.*** At the command ***REST*** each pupil keeps one foot in place, but is not required to preserve silence or immobility.

At the command ***AT EASE*** each pupil keeps one foot in place and is required to keep silence, but no immobility.

To resume attention: 1. ***Class,*** 2. ***ATTENTION.***

The pupils take the position of attention.

Eyes Right or Left

1. ***Eyes,*** 2. ***RIGHT*** (***LEFT***), 3. ***FRONT.***

At the command ***right,*** turn the head to the right oblique, eyes fixed on the line of eyes of the pupil in, or supposed to be in, the same rank. At the command ***FRONT,*** turn the head and eyes to front.

Facings

To the flank: 1. ***Right*** (***left***), 2. ***FACE.***

Raise slightly the left heel and right toe, face to

the right, turning on the right heel, assisted by a slight pressure on the ball of the left foot ; place the left foot by the side of the right. Left face is executed on the left heel in the corresponding manner.

Right (left) half FACE is executed similarly, facing 45°.

To the rear: 1. ***About,*** 2. ***FACE.***

Carry the toe of the right foot about a half foot-length to the rear and slightly to the left of the left heel without changing the position of the left foot ; face to the rear, turning to the right on the left heel and right toe ; place the right heel by the side of the left.

Numbering

In numbering, the leader on the right calls out *one*, the next pupil *two*, the next *three*, and so on, without interruption down the line, each pupil turning the head first to the right (to get the number), then to the left (calling the number to his right neighbor), and then to the front again.

Command : From the right — number !

The teacher then uses the following command only: 1. ***Count,*** 2. ***OFF.***

At this command, all except the right guide execute ***eyes right,*** and beginning on the right, the pupils count — ***one, two, three, four.*** Each

pupil turns his head and eyes to the front as he counts.

Alignment

1. ***Right*** (***left***), 2. ***DRESS***, 3. ***FRONT***.

At the command ***dress*** all pupils place the left hand upon the hip (whether dressing to the right or left) ; each pupil except the guide executes ***eyes right***, places himself so that his right arm rests lightly against the arm of the pupil on his right, and so that his eyes and shoulders are in line with those of the pupil on his right.

Steps and Marchings

Quick Time

To exercise the quick time step, explain the character of the step : Marching in cadence by observing good posture and equal steps.

Right from the beginning insist on shifting of the weight of the body on the ball of the foot, and slightly more on the right leg. Left knee straight. The instructor should execute the exercise himself, and then let the boys practice by a command : 1, 2, 3, etc. steps — ***MARCH***.

At the command ***MARCH***, move the left foot smartly straight forward 30 inches from the right, sole near the ground, and plant it without shock ;

next, in like manner, advance the right foot and plant it as above ; continue to march. The arms swing naturally. Practice the exercise with a single boy, then with small and large single ranks, and finally with the whole section. In a short time the whole class will march correctly a given number of steps.

Next have the class in single rank march at the command : 1. ***Forward***, 2. ***MARCH***.

The instructor, when necessary, indicates the cadence of the step by calling ***one***, ***two***, ***three***, ***four***, or ***left***, ***right***, the instant the left and right foot, respectively, should be planted.

The command, 1. ***Class***, 2. ***HALT***, is given as either foot strikes the ground; plant the other foot as in marching; raise and place the first foot by the side of the other. If in double time, drop the hands.

Insist on good posture while marching. The number of quick time steps per minute is 120.

Being at a halt, or in march in quick time, to march in double time: 1. ***Double time***, 2. ***MARCH***.

If at a halt, at the first command shift the weight of the body to the right leg. At the command ***MARCH***, raise the forearms, fingers closed, to a horizontal position along the waist line; take up

an easy run with the step and cadence of double time, allowing a natural swinging motion to the arms.

If marching in quick time, at the command ***MARCH***, given as either foot strikes the ground, take one step in quick time, and then step off in double time.

To resume the quick time : 1. ***Quick time***, 2. ***MARCH.***

At the command ***MARCH***, given as either foot strikes the ground, advance and plant the other foot in double time, resume the quick time, dropping the hands by the sides.

The length of the full step in double time is 36 inches. The cadence is at the rate of 180 steps per minute. Double time, developing and strengthening heart and lungs, should be practiced often, but with caution. The instructor should be able to pick out those boys whose physical conditions allow only a limited participation in these exercises. For the boys of Course II four minutes ought to bring a good result. Each year a proportional increase in time is advisable.

A pupil, who for one or another reason has to stop practice of double time, should begin again with the minimum. After a long exercise in double time, do not stop abruptly, but bring heart and lungs to normal work by going over to quick time.

Exercise in double time should be part of every lesson in physical training.

To Mark Time

Being in march: 1. ***Marktime,*** 2. ***MARCH.***

At the command ***MARCH,*** given as either foot strikes the ground, advance and plant the other foot ; bring up the foot in rear and continue the cadence by alternately raising each foot about 12 inches and planting it on line with the other. Being at halt, at the command ***MARCH,*** raise and plant the feet as described above.

The Half Step

1. ***Half step,*** 2. ***MARCH.***

Take steps 15 inches in quick time, 18 inches in double time.

Forward, half step, HALT, and ***mark time*** may be executed one from the other in quick or double time. To resume the full step from half step or mark time, command : 1. ***Forward,*** 2. ***MARCH.***

Side Step

Being at a halt or mark time: 1. ***Right (left) step,*** 2. ***MARCH.***

Carry and plant the right foot 15 inches to the right ; bring the left foot beside it, and continue the movement in the cadence of quick time. The

side step is used for short distances only and is not executed in double time.

Back Step

Being at a halt or mark time: 1. ***Backward,*** 2. ***MARCH.***

Take steps of 15 inches straight to the rear. The back step is used for short distances only and is not executed in double time.

To March by the Flank

Being in march: 1. ***By the right (left) flank,*** 2. ***MARCH.***

At the command ***MARCH,*** given as the right foot strikes the ground, advance and plant the left foot, then face to the right in marching, and step off in the new direction with the right foot.

To March to the Rear

Being in march: 1. ***To the rear,*** 2. ***MARCH.***

At the command ***MARCH,*** given as the right foot strikes the ground, advance and plant the left foot, turn to the right about on the balls of both feet, and immediately step off with the left foot. If marching in double time, turn to the right about, taking four steps in place, keeping the cadence, and then step off with the left foot.

Change Steps

Being in march: 1. ***Change step***, 2. ***MARCH***.

At the command ***MARCH***, given as the right foot strikes the ground, advance and plant the left foot; plant the toe of the right foot near the heel of the left, and step off with the left foot. The change on the right foot is similarly executed, the command ***MARCH*** being given as the left foot strikes the ground.

To preserve the alignment when marching: ***GUIDE RIGHT*** (***LEFT***).

The pupils preserve their intervals from the side of the guide, yielding to pressure from that side and resisting pressure from the opposite direction; they recover intervals, if lost, by gradually opening out or closing in; they recover alignment by slightly lengthening or shortening the step.

To stay the execution of the movement when marching, for the correction of errors, the command, 1. ***In place***, 2. ***HALT***, is given. All halt and stand fast. To resume the movement the command, 1. ***Resume***, 2. ***MARCH***, is given.

To revoke a preparatory command, or, being at a halt, to begin anew a movement improperly

begun, the command, ***AS YOU WERE***, is given, at which the movement ceases and the former position is resumed.

Change from Line to Marching Column

Command: 1. ***Squad right*** (***left***), 2. ***MARCH.***

Number 1 (pivot) in place turns to the right gradually and accordingly to the advance of the turning flank. Number 4 marches in quick time, circling the pivot. Number 2 and 3 follow the movement of 4 with shortened steps.

After completing the turning, the command, 3. ***Squad***, 4. ***HALT***, is given to stay the movement, or, if marching ahead is intended, the squads execute ***forward MARCH***, without command.

Partial changes of direction may be executed:

By interpolating in the preparatory command the word ***half***, as ***Column half right*** (***left***), or ***right*** (***left***) ***half turn***, a change of direction of 45° is executed.

By the command, ***Incline to the right*** (***left***), the guide, or guiding element, moves in the indicated direction and the remainder of the command conforms. This movement effects slight changes of direction.

Being in column of squads, to change direction:

1. ***Column right*** (***left***), 2. ***MARCH.***

At the second command the front rank of the

leading squad turns to the right on moving pivot as in the school of the squad ; the other ranks, without command, turn successively on the same ground and in a similar manner.

Opening and Closing of the Marching Column

To open the marching column, command :

1. ***To the left*** (***right,*** or ***from the center***) ***take distances,*** 2. ***MARCH.*** With simultaneous arm raising sideward of the front squad all the others take space in given direction until the finger points do. not touch any more. Then follows arm lowering and dressing forward and sideward.

The marching column is restored to the command : 1. ***To the right*** (***left***), or ***to the center close,*** 2. ***MARCH.***

B. FREE STANDING EXERCISES.

In regard to the execution we refer to the numerous illustrations. Besides, the following explanations should be considered :

(*a*) For the exercises of arm raising and arm stretching the rule holds good that in the forward, upward, and downward position of the arms the hands are in ulnar position (palms facing each other), in the sideward position they are

usually in dorsal position (palms turned downward), or, if specially indicated, in palmar position (palm turned upward) or in ulnar position. In the forward position (reach position) the arms are horizontal at the shoulder level, keeping the body erect ; in the upward position (stretch position) the arms are in the same line with the longest line of the body and in the sideward position in prolongation of the shoulder line, no matter whether the body is upright or inclined in any direction.

In the *upward bending* position of the arms, the shoulders are drawn back, the fisted hands are beside the shoulders, palms turned forward. In stretching the arms the fingers also are stretched (Fig. 2, p. 93).

In the *forward bending* the bent arms are shoulder high, forearms in front of upper arms ; hand, wrist, and forearm kept in line. The shoulders must not be raised, elbows must be drawn back, whereby the hands with stretched and closed fingers are brought well apart (Fig. 3, p. 93).

To take *neck-rest* position the arms are bent without moving the head or body and the hands placed at the back of the neck with the wrists straight, — the finger tips just meeting. The elbows must be well drawn

back, the chest expanded, and the head kept erect (Fig. 15, p. 103).

For the execution of *arm circling*, the fingers may remain straight or the fist may be closed.

(*b*) *Arm swinging* and *leg swinging* is a swinging change of two arm or leg positions through the downward position. A swinging leg raising and immediate lowering to starting position is called *flinging*.

(*c*) In *heel raising* and *lowering*, executed in succession, the counts 1, 2, 1, 2, etc., are used. The same time is given to *knee bending* and *knee stretching*.

(*d*) In the *trunk bending* forward the entire spinal column is bent forward and the head is slightly lowered. To return to the erect position the movement starts with head lifting, then follows the extension of the entire spine and its raising (Fig. 21, p. 111).

Contrary to the positions taken in the trunk forward flexion, the spinal column remains straight in the *trunk stooping* position. Here the trunk, with erect head position, rotates as a whole in the hip joint (Fig. 20, p. 109).

The trunk bending backward takes place in the upper part of the spine, *i.e.*, the dorsal part, and is principally executed in stride-standing position and in normal position (Fig. 8, p. 98).

The trunk bending backward with the flexion of the lumbar region of spine is of little value, and for pupils with hollow back even harmful.

(*e*) All stepping positions with simultaneous knee bending of one leg are differentiated as *lay-out* and *fall-out.*

The *lay-out* is a stepping position in which the stationary leg is bent; in the *fall-out* position the flexion takes place in the stepping leg. The weight of the body is principally on the bent leg. In lay-out and fall-out positions the trunk takes a reclining or stooping position (without rotation), so that it will form a straight line with the straight leg. In stepping (walk) positions with straight legs the trunk is erect; in leg raising the trunk is in prolongation of the stationary leg.

(*f*) Most of the exercises are described left, very few for the right; naturally, all the exercises must be practiced left and right.

In exercises of four parts, in which the third and fourth parts represent the retrogressive movements to second and first, we only describe the first two parts; 4 parts refers to the last two parts (as additional to the first two).

Tenth Year

As we have said on page 35, each gymnastic lesson should contain arm, leg, and trunk exercises. To make a good selection we choose for the first part of the lesson the material in *Leg Exercises with and without Arm Exercises*, completing or preparing them if necessary with *Arm Exercises*. For the second part the material of the *Trunk Exercises in Series or Combined with Leg Movements* will serve and, if necessary, be completed with the exercises under the caption of *Trunk Exercises*. For example, a lesson for boys of ten years of age consists in its first part of the material included in numbers 1–24 ; and in its second part of material in numbers 25–30.

The free standing exercises printed in heavy type are to be executed slowly.

Arm Exercises

(*a*) *From Normal Position :*

1. Hands on hips ; place ; position !
2. Arm raising forward (backward) (inhaling), arm lowering (exhaling).
3. **Arm raising** sideward (forward-upward, sideward-upward) (inhaling) ; arm lowering (forward, sideward) (exhaling).

4. **Arm bending** upward (inhaling) (Fig. 2); arm lowering (exhaling).
5. **Arm bending** forward (inhaling) (Fig. 3); arm lowering (exhaling).

(*b*) *From the Bend Position:*

If no other description is given, the bend position is meant: upward bending (Fig. 2) or the upward bending of Swedish gymnastics.

Fig. 2.

6. Arm stretching forward (**sideward, upward**) (exhaling); **arm bending** (inhaling) (also with quick arm stretching sideward or upward).

(*c*) *From the Forward Bending Position:*

7. **Arm stretching** sideward (exhaling); **arm bending** forward (inhaling).

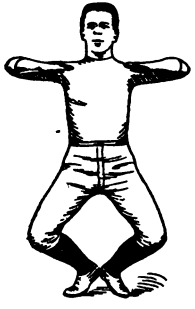


Fig. 3.

(*d*) *From Normal Position:*

8. **Arm bending**; arm stretching forward (**sideward, upward**); **arm bending**; arm lowering (also beginning with arm raising).
9. Change of two or three arm positions:
   (*a*) Reach (forward) and **stretch** (upward) position (several times or as an exercise of 4 parts).

(*b*) **Side** and **stretch** position (several times or as an exercise of 4 parts).

(*c*) Reach, **stretch, side,** and normal position.

(*d*) **Side, stretch,** reach, and normal positions.

Leg Exercises with and without Arm Exercises

If no arm exercises are indicated, the hands are placed on hips.

FIG. 4.

10. (*a*) **Heel raising** (inhaling); lowering (exhaling).

(*b*) Same with arm raising forward (sideward-upward) or with arm bending.

(*c*) Alternate heel raising and lowering.

Count 1, 2 ! (also with arm raising sideward, forward-upward).

11. (*a*) **Heel raising** (inhaling); **knee bending** (exhaling); knee stretching (inhaling); lowering (exhaling).

(*b*) Same with arm bending; arm stretching forward (sideward) (4 parts).

(*c*) Same with arm raising sideward; arm bending forward (Fig. 3) (4 parts).

(*d*) Same with arm raising sideward (sideward-upward); change to arms in sideward position (4 parts).

12. (*a*) **Knee bending**; knee stretching.
(*b*) Same with arm raising forward (sideward).
(*c*) Alternate knee bending and stretching (also with arm stretching forward) (sideward).

Fig. 5.

13. (*a*) **Leg raising** left forward (sideward, backward) (inhaling); leg lowering left (exhaling).
(*b*) Same with arm raising forward (sideward, Fig. 4, forward-upward) or with arm bending.

Fig. 6.

14. Knee raising right (also slow) (Fig. 5); lowering right.
15. Lower leg raising left (Fig. 6); lowering left.
16.[1] (*a*) **Heel raising** (inhaling); lowering (exhaling), then **leg raising** left forward (sideward, backward) (inhaling); leg lowering left (exhaling).
(*b*) As in (*a*) but with knee raising instead of leg raising.

[1] Exercise 16 can be executed so as to alternate the second leg movement after twice heel raising.

(*c*) As in (*a*), but lower leg raising instead of leg raising.

17. **Knee bending**; knee stretching, then **leg raising** left forward (sideward, backward); leg lowering left.
18. (*a*) Front-step left (Fig. 12) (side-step, back-step) left; closing-step left.
    (*b*) Same with arm raising forward (sideward, forward-upward).
    (*c*) Same with arm raising and in step position, a change of arm raising from No. 9, page 93.
19. (*a*) Jump to stride position; jump to position.
    (*b*) In stride position **knee bending** left (inhaling); **knee stretching** left (exhaling).
    (*c*) As in (*b*) with arm bending.
20. Fall-out right sideward (Fig. 17, p. 107) (inhaling); closing-step right (exhaling).
21. (*a*) **Heel raising** with arm bending; **arm stretching** sideward (upward) (4 parts).
    (*b*) **Knee bending** with arm raising sideward; **arm bending forward** (**change** to upward position) (4 parts).
22. Leg flinging left forward (sideward).
23. (*a*) Jumping in place.
    (*b*) Jumping to stride position and back to position.

(*c*) Four jumps in place and twice jumping to stride and back to position.

(*d*) Repeat; but with the first of the four jumps quarter turn left.

24. (*a*) **Heel raising** with arm raising forward or forward-upward; moderate knee bending with arm swinging to backward position; jump in place to deep knee bending with arm swinging to forward position; knee stretching with arm lowering.

(*b*) Repeat the exercise, but use the second and third movement in quick succession.

Trunk Exercises

In stride position, hands on hips:

25. **Trunk stooping** forward (Fig. 20, p. 109) (inhaling); **trunk stretching** (exhaling).

FIG. 7.

26. (*a*) **Trunk bending** forward (Fig. 21, p. 111) (exhaling), **trunk stretching** (inhaling).

The trunk stretching has to be executed slowly and by going through the stooping position.

(*b*) Trunk bending left sideward (Fig. 7), (backward, Fig. 8, p. 98) (inhaling); trunk stretching (exhaling).

27. **Trunk turning**, left (with head turning left) (inhaling) (Fig. 9); trunk turning forward (exhaling).

FIG. 8.

Trunk Exercises in Series, or Combined with Leg Movements

28. In stride position:
(*a*) **Trunk bending** forward (sideward, backward); **trunk stretching**, then **heel raising**; lowering.
(*b*) **Trunk stooping** forward; **trunk stretching**, then **heel raising**; lowering.
(*c*) **Trunk turning** left; trunk turning forward, then **heel raising**; lowering.
(*d*) As in (*a*), (*b*), and (*c*), then **knee bending** left; **knee stretching** left.

FIG. 9.

29. In stride position:
Trunk stooping forward; head turning left (Fig. 10).
30. (*a*) Jump to stride position:
Trunk bending forward (sideward, backward).
Trunk stretching; jump to position, then knee raising alternately.
(*b*) As in (*a*), but trunk stooping forward instead of trunk bending.

(*c*) As in (*a*), but trunk turning instead of trunk bending.

(*d*) As in (*a*), (*b*), and (*c*), then front-step, side-step, back-step.

(*e*) As in (*a*), (*b*), and (*c*), then twice **knee bending**.

FIG. 10.

ELEVENTH YEAR

Arm Exercises

(*a*) *From Normal Position:*

1. **Arm bending** to neck-rest position (Fig. 15, p. 103 and Fig. 17, p. 107); arm lowering.
2. Arm raising backward; change of backward to upward position (through normal position).
3. **Arm raising** sideward in ulnar position (sideward-upward); **arm bending** to neck-rest position (4 parts).

(*b*) *From Arm Bending Position:*

4. **Arm stretching** sideward; change to forward and **sideward position**; **arm bending**.
5. **Arm stretching** upward; change to forward and **upward position**; **arm bending**.
6. **Arm stretching** upward; **change** to sideward and upward position; **arm bending**.

(*c*) *From the Neck-rest Position:*

7. **Arm stretching** sideward; **change** to upward

and sideward position; **arm bending** to neck-rest position.

8. **Arm stretching** upward; **change** to sideward and upward position; **arm bending** to neck-rest position.

Leg Exercises with and without Arm Exercises

From now on the description of combined exercises contains the leg, as well as the arm movement. In practicing, the leg exercises must be practiced separately before they are combined with arm movements.

Fig. 11.

9. **Heel raising** with arm raising forward-upward; **deep knee bending** with change to forward position of arms (Fig. 11) (4 parts).
10. (*a*) **Deep knee bending** with arm stretching forward (sideward) from arm bending position.

(*b*) Alternate deep knee bending and stretching (same with arm raising forward, sideward).

11. **Leg raising** left forward (backward); **change** to backward (forward) position left; leg lowering left.
12. Leg flinging left backward.
13. Knee raising left; **leg stretching** left forward (sideward, backward); leg lowering left.

14. Knee raising left with arm raising forward; **change** to sideward position of arms; knee and arm lowering.
15. **Leg raising** left forward (backward) with arm raising forward; **change** to sideward (upward) position of arms (4 parts).
16. Front-step left with arm raising forward-upward (Fig. 12) (backward); **knee bending** left with change to sideward (upward) position of arms (through normal position) (4 parts).

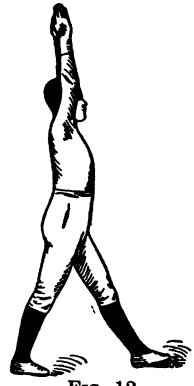


Fig. 12.

17. Fall-out right forward with arm raising forward-upward (Fig. 13); closing-step right and arm lowering forward.
18. **Deep knee bending**; knee stretching, then fall-out left forward (sideward); closing-step left to position.

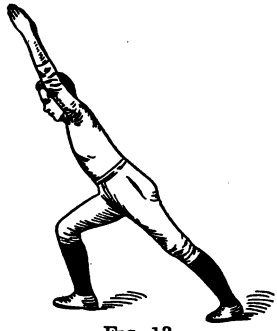


Fig. 13.

19. **Lay-out** left backward with arm raising backward (forward-upward) (Fig. 13); closing-step left with arm lowering (forward).

20. **Heel raising**; lowering, then lay-out left backward; closing-step left to position.
21. (*a*) Front-step left to heel raising right with arm raising forward-upward (Fig. 14); closing-step left with arm lowering forward.

Side-step left to heel raising right with arm raising sideward-upward; closing-step left to position with arm lowering sideward.

Fig. 14.

Back-step left to heel raising right with arm raising forward-upward; closing-step left with arm lowering forward.

(*b*) Front-step left to heel raising right with arm raising forward-upward; **change** to sideward position of arms in palmar position (repeat).

Side-step left to heel raising right with arm raising sideward in ulnar position; **arm bending** to neck-rest position (Fig. 15) (repeat).

22. **Lay-out** left backward with arm raising forward-upward; **arm bending** (to neck-rest position) (repeat).
23. (*a*) **Heel raising** with arm raising forward-upward; knee bending with arm swinging to backward position and slight stooping forward of upper body and jump forward to deep knee bending with arm swinging to

forward position; knee stretching with arm lowering.

(*b*) As in (*a*), but without stooping forward, and jump in place with high knee raising.

24. Front-step left; leg flinging right forward (repeat); closing-step left.
25. Front-step left with arm raising backward; jump forward to deep knee bending with leg flinging right and with arm swinging to forward position; knee stretching with arm lowering.

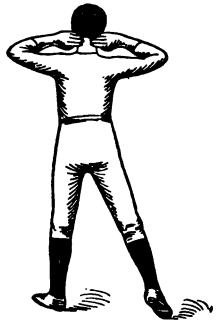


FIG. 15.

Trunk Exercises

The following exercises are to be executed in the position of attention; by trunk turning the feet are closed with heels together as well as toes (Fig. 9, p. 98).

26. **Trunk bending** forward (backward); **trunk stooping** forward; **trunk turning.**
27. (*a*) **Change** of trunk stooping forward and trunk bending forward (repeat or in 4 parts).

(*b*) **Change** of trunk bending backward and trunk stooping forward.

(*c*) **Trunk bending** backward; **trunk stooping** forward; **trunk bending** forward; **trunk stretching.**

(*d*) **Change** of trunk bending left and right sideward (4 parts).

(*e*) **Change** of trunk turning left and right (4 parts).

Trunk Exercises in Series or in Combination with Leg Exercises

28. (*a*) **Change** of trunk stooping forward and trunk bending forward (4 parts), then change of heel raising and deep knee bending (4 parts).

(*b*) **Trunk bending** alternately sideward; then **leg raising** alternately sideward.

(*c*) **Change** of trunk stooping forward and trunk bending backward; trunk stretching, then knee raising left; **leg stretching** left forward (sideward, backward); leg lowering left.

29. Front-step left; **trunk turning** left (Fig. 19, p. 109) (repeat).

30. Front-step left; **trunk bending** left sideward (repeat).

Twelfth Year

Arm Exercises

A complete system of new exercises is not provided for the twelfth gymnastic year. The exercises for the preceding year should be repeated

and increased in such a way that two movements repeat themselves several times so as to form exercises of six, eight, and more movements. Furthermore, some exercises can be arranged in which arm bending and stretching (or the reverse) are executed in quick succession without interruption, also changes of arm positions.

1. **Arm raising** forward-upward ; change to backward and **upward** position; arm lowering forward, same, but arm swinging to backward and immediately again to upward position.
2. **Arm raising** sideward; **arm bending** forward; **arm stretching** sideward; arm lowering.
3. **Arm raising** sideward in ulnar position ; **arm bending** to neck-rest position ; **arm stretching** sideward; arm lowering.
4. **Arm raising** forward-upward; **arm bending** and immediately arm stretching forward; **change** to upward position; arm lowering forward.
5. **Arm raising** sideward-upward ; **arm bending** and immediately **arm stretching** sideward ; **change** to upward position ; arm lowering sideward.

Leg Exercises with and without Arm Exercises

6. Back-step left with arm raising sideward-upward; **knee bending** left with arm bend-

ing (Fig. 16); knee stretching with arm stretching upward (second and third movements repeated); closing-step left with arm lowering sideward.

7. (*a*) Fall-out left forward with arm bending; **arm stretching** upward; **arm bending**; closing-step left with quarter turn right and arm lowering; and repeat three times.

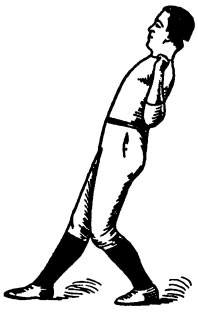


FIG. 16.

(*b*) Fall-out left sideward with arm bending; **arm stretching** sideward (upward); **arm bending**; closing-step left with arm lowering.

8. (*a*) **Lay-out** left sideward with arm raising sideward-upward; closing-step left with arm lowering sideward.

(*b*) **Lay-out** left forward with arm raising sideward (forward-upward); closing-step left with arm lowering (forward).

9. (*a*) **Lay-out** left forward with arm raising sideward; **arm bending** forward; **arm stretching** sideward; closing-step left with arm lowering.

(*b*) **Lay-out** left sideward with arm raising sideward-upward; **arm bending** to neck-rest position (Fig. 17, p. 107); **arm stretching**

upward; closing-step left with arm lowering sideward.

10. **Lay-out** left forward (backward, sideward) with arm raising sideward; closing-step left to **heel raising** with arm bending; lowering (3 and 4 parts).
11. As in 10, but the closing-step to **deep knee bending** with arm stretching forward.
12. Fall-out left sideward (forward) with arm bending; **change of knee bending** with arm stretching upward (4 parts).

Fig. 17.

13. Leg swinging left forward; backward; forward and leg lowering left.
14. (*a*) **Leg raising** left forward with arm raising forward; **change** to backward position left with change to upward position of arms (4 parts). (*b*) Also beginning with **leg raising** left backward and arm raising sideward and change to upward position of arms (4 parts).
15. (*a*) Front-step left to heel raising right with arm raising forward-upward; **leg raising** right backward with change to sideward position of arms (4 parts).

(*b*) Side-step left to heel raising right with arm raising sideward-upward ; **leg raising** right sideward with change to sideward position of arms (4 parts).

(*c*) Back-step left to heel raising right with arm raising forward-upward ; **leg raising** right forward with change to sideward position of arms (4 parts).

16. (*a*) Two steps and jump forward with arm raising forward.

(*b*) Front-step left and jump forward with quarter turn left (4 times).

Combining Trunk Exercises with Leg and Arm Movements

The addition of arm movements to those of the trunk should take place only exceptionally. As a rule it is sufficient to combine the trunk exercises with the leg exercises or execute them with arm movements; for instance, trunk bending, trunk stooping, trunk twisting in stride position, in the three step positions, or in the normal position, with arm bending (upward), arm raising sideward, upward, or bending to neck-rest.

FIG. 18.

17. (*a*) Front-step left with arm raising forward-upward ; **trunk stooping** (**trunk bending**) for ward (repeat) (Fig. 18).
(*b*) Side-step left with arm raising sideward-upward ; **trunk bending** left sideward (repeat).
(*c*) Back-step left with arm raising sideward-upward; **trunk bending** backward with arm bending upward (repeat).
(*d*) Front-step left with arm raising sideward ; **trunk twisting** left ; arm bending forward (Fig. 19); **arm stretching** sideward ; trunk turning forward ; closing step left with arm lowering.
(*e*) Front step left with arm raising sideward ; **trunk bending** left sideward (repeat).

Fig. 19.

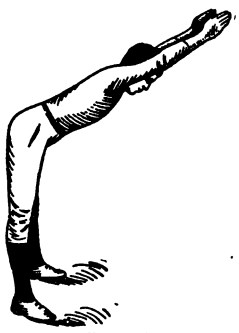


Fig. 20.

18. **Trunk bending** backward ; **trunk stooping** forward ; **trunk bending** forward ; **trunk stretching**, then twice **deep knee bending**.

19. In side-step position.
(*a*) **Arm raising** sideward upward ; **trunk stooping** forward (Fig. 20) ; **arm bending** ;

arm stretching upward; **trunk stretching**; arm lowering sideward.

(*b*) **Arm raising** sideward-upward; **trunk bending** left sideward; **arm bending** to neck-rest position and so on.

(*c*) **Arm raising** forward-upward and **trunk bending** backward; **change** to sideward in dorsal position and upward position of arms (repeat); trunk stretching and arm lowering forward.

(*d*) **Trunk turning** left with arm raising sideward in ulnar position; **arm bending** to neck-rest position (repeat).

NOTE. — *To follow exercises* (*a*) *to* (*d*): **Knee bending left and repeated change of knee bending.**

20. Change of **trunk stooping** forward and **trunk bending** forward (4 parts), then knee raising left; **leg stretching** left forward; knee raising left; lowering left.

21. (*a*) **Arm raising** sideward-upward; **trunk bending** forward downward with change to forward position of arms (Fig. 21); **trunk stretching** with change to upward position of arms; arm lowering sideward.

(*b*) **Arm bending**; **trunk bending** left sideward with arm stretching upward (4 parts).

(*c*) **Arm raising** sideward in ulnar position;

trunk bending backward with arm bending to neck-rest position (4 parts).

(*d*) Arm raising backward; **trunk stooping** forward with change to upward position of arms (through downward position) (4 parts).

(*e*) **Arm raising** sideward; **trunk turning** left with arm bending forward (4 parts).

FIG. 21.

22. Arm raising backward; **trunk stooping** forward with change to upward position of arms (through downward position); arm swinging to backward and immediately again to upward position (repeat).

C. EXERCISES ON APPARATUS

The *rest* and *suspension* (hang) can be executed with stretched or with bent arms, as can the swinging. Where, in an exercise, we speak of *rest*, and of *hang*, it is always understood rest and hang with stretched arms. The same applies to swinging forward and backward; *fore* and *rear swinging* means swinging with stretched (extended) arms. On the parallel-bars swinging, with a few exceptions, always begins from the cross-standing position.

Climbing Poles

TENTH YEAR

Inclined Poles

The grasping or clinching of the poles with the legs is called the *climbing-clinch.* Climbing-clinch left indicates that the left foot is in front of the pole and of the right foot (and the reverse). The hold of the hands on poles we call the *grasp.* In climbing the hands move either hand after hand or both hands move simultaneously.

Fig. 22.

Starting position: Toe stand with arm oblique backward and eyes upward.

1. Hanging on two poles (repeat); also with inter-jump.
2. With grasp in head height : Jump to bent-hang on one pole with climbing-clinch left (Fig. 22) (repeat).
3. From bent-hang on one pole with climbing-clinch left : Inter-jump (without releasing grasp) to same hang position with climbing-clinch right (repeat).
4. Climbing on one pole with either climbing-clinch and either grasp-over ; climbing down-

ward. (The movements follow in opposite way to the climbing upward.) Another safe way of the back movement is the following: In climbing-clinch position the knees are raised as much as possible (Fig. 22). In sliding body downward hand after hand grasps lower. Use exclusively one of these two back movements.

Vertical Poles

5. and 6. Practice as in 1 and 2 on the inclined poles.
7. In bent-hang on one pole: Change of climbing-clinch left and right.
8. In bent-hang on one pole with climbing-clinch left: Release and regain hold of one hand.
9. Climbing on one pole with either climbing-clinch and either grasp-over; climbing downward.
10. Bent-hang with grasp on two poles in head height and pressing legs against them (Fig. 23); the same several times with inter-jump.
11. Bent-hang with grasp on two poles and pressing legs against them: Jumping down to deep knee bending and jump forward to fall-hang.

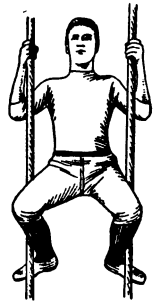


Fig. 23.

12. Climbing with grasp on two poles and pressing legs against them ; climbing downward.

ELEVENTH YEAR

Inclined Poles

1. In hang position on two poles : Knee raising left.
2. From bent-hang with grasp over head on two poles: Several times inter-jump to the same hanging position.
3. Climbing on one pole with either climbing-clinch and grasp; climbing downward.

Vertical Poles

4. In bent-hang with pressing of legs against poles (Fig. 23) : Releasing and regaining hold of one hand.
5. In hang on two poles: Knee raising left.
6. Climbing on one pole with either climbing-clinch and grasp; climbing downward.

TWELFTH YEAR

Inclined Poles

1. From bent-hang on one pole : Several times inter-jump to same hanging position.
2. In bent-hang on two poles : Knee raising left ; also lower leg raising left.

3. Climbing on one pole with change of climbing-clinch with each pull, either grasp-over of hands; climbing downward.
4. Climbing to top of one pole with either climbing-clinch in least possible pulls; climbing downward.

Vertical Poles

5. From bent-hang on two poles; several times inter-jump to same hang position.
6. Climbing on one pole with change of climbing-clinch with each pull and either grasp-over of hands ; climbing downward.
7. Climbing on one pole with either climbing-clinch, moving both hands simultaneously ; climbing downward.
8. In bent-hang on two poles : Change of climbing-clinch on left and right pole.

Horizontal Bar

The grips used in these various exercises are:

(*a*) *Ordinary grip;* knuckles turned to the rear, thumbs around bar.

(*b*) *Reversed grip;* knuckles turned forward, thumbs around bar.

(*c*) *Combined grip;* a combination of the two.

TENTH YEAR

Bar : Hip to Chest High

Starting position : Side-stand forward with ordinary grip.

1. Running forward to fall-hang (Fig. 24) ; running back to side stand (repeat).

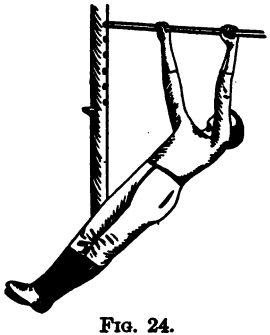


Fig. 24.

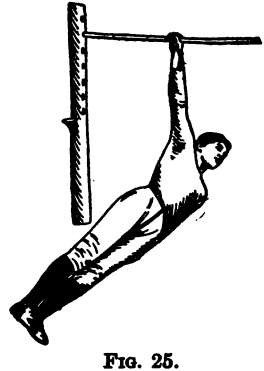


Fig. 25.

2. Jump forward to fall-hang ; jump backward to deep knee bending (repeat) ; stretching.

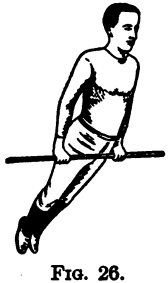


Fig. 26.

3. Jump forward to fall-hang ; release left hold and quarter turn to side-fall-hang (Fig. 25); turning back with retaking hold left; jump backward to deep knee bending.
4. Jump to rest (Fig. 26) (repeat); also with inter-jump.

5. Jump to rest; change of fall-hang and rest position by inter-jump (repeat).
6. In rest position : Trunk lowering forward, hands in firm grasp, with aid of a comrade (Fig. 27) (repeat).

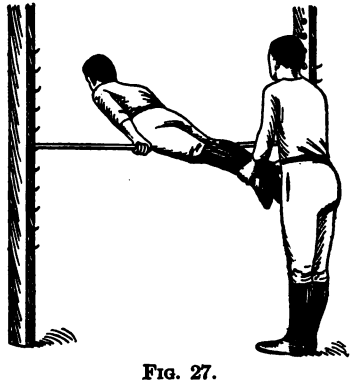


Fig. 27.

7. Jump forward to fall-hang; leg raising left (repeat) ; jump backward to deep knee bending.

Bar : Head High

Starting position : Cross-stand with combined grip.

8. Knee hanging right on right side of bar (repeat) (Fig. 28).
9. Knee hanging left on left side of bar; change from knee hanging right to left by inter-jump (repeat).

10. In knee hang position left: Several times arm bending (or releasing hold of left hand).

Bar in Jump Reach

Starting position: Side-stand underneath bar. All exercises to be executed with ordinary grip.

11. Hang (repeat); also with inter-jump.

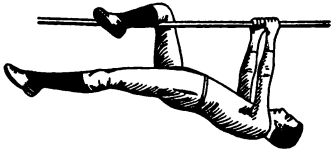


FIG. 28.

12. In hang: Knee raising left (repeat).
13. In hang: Lower leg raising left (repeat).
14. Traveling left sideward in free style.

ELEVENTH YEAR

Bar: Hip to Chest High

Starting position: Side-stand forward.

1. Jump to rest with reversed grip; lowering forward to stand.
2. With reversed grip and bent arms: Leg raising left backward; leg swinging (once or twice) to bent-knee-instep-balance-hang (Fig. 29, p. 119).
3. In rest with ordinary grip: Trunk lowering forward, hands in firm grasp, with aid of

comrade; head turning left (repeat) ; trunk raising.

4. Rest with ordinary grip; lowering forward to deep knee bending ; jump forward to fall-hang ; change of grip left, twice; jump backward to stand.

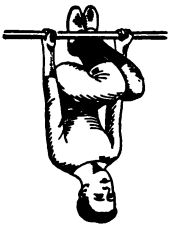


Fig. 29.

5. From bent-knee-instep-balance-hang with reversed grip: Lowering to deep knee bending; jump forward to fall-hang ; jump backward to position.
6. Jump forward to fall-hang with ordinary grip ; arm bending (repeat).
7. Swinging in left-outer-knee-hang with ordinary grip (Fig. 30).

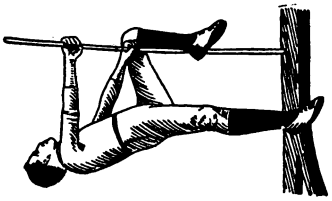


Fig. 30.

Bar : Head High

Starting position : Side-stand forward.

8. Bent-hang with reversed grip (Fig. 31) (repeat) ; also with inter-jump.
9. Swinging in bent-hang with reversed grip, after second rear-swing downward jump.

10. With reversed grip : Leg raising left backward; leg swinging once or twice to bent-knee-instep-balance-hang; leg lowering with arm bending.
11. Swinging in left-outer-knee-hang with ordinary grip (repeat); front-knee-swing to sitting on left thigh (Fig. 32, p. 121); lowering backward to knee hang and jumping down.

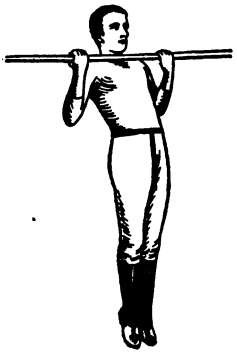


Fig. 31.

Bar in Jump Reach

All exercises are executed with ordinary grip.

12. (*a*) In hang : Knee raising left ; lowering left with simultaneous knee raising right, etc., in beats.
(*b*) In hang : Leg raising left ; lowering left with simultaneous leg raising right, etc., in beats.
13. In hang : Change of grip to reversed grip.
14. Successive releasing and regaining hold (without jumping down). Hand raising as high as possible.
15. From side-stand behind the bar : Jump to fore-swing in hang position and jumping down forward (repeat).

16. From side-stand behind the bar : Jump to swinging in hang position and after the first (second) rear-swing jumping downward.

TWELFTH YEAR

Bar : Chest High

Starting position : Side-stand forward, ordinary grip.

1. From rest : Inter-jump to fall-hang; leg raising left forward with arm bending (repeat) ; jump backward to stand.
2. In rest: Trunk lowering forward, hands in firm grasp, with aid of comrade; releasing of grip (arm bending or arm raising sideward) (repeat); trunk raising.

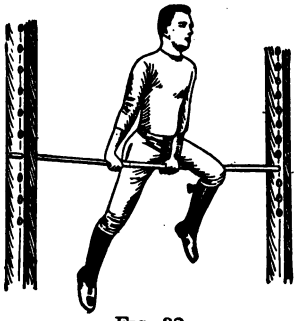


FIG. 32.

3. With reversed grip : Leg swinging left and with the second fore-swing circle-up-swing to rest.
4. In bent-knee-instep-balance-hang : Squat left to knee hang ; squat to bent-knee-instep-balance-hang.
5. Swinging in left-outer-knee-hang (between

hands) and with the first (second) rear-swing front-knee-swing ; lowering backward to knee hang and jumping down (squat left to jumping down).

Bar : Head High

Starting position : Side-stand forward.

6. Bent-hang with reversed grip (repeat); also with inter-jump.

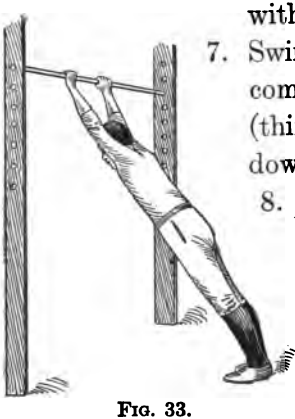


Fig. 33.

7. Swinging in bent-hang with combined grip and after second (third) rear-swing jumping down.
8. With reversed grip and stretched arms: Layout left backward; closing-step right to arch hang standing position (Fig. 33) ; fall-out left forward and closing-step right (repeat).
9. With ordinary grip : Under swing to deep knee bending (repeat).
10. Swinging in bent-hang with combined grip and jumping down with the second fore-swing.

Bar in Jump Reach

11. In hang with ordinary grip : Knee raising left; leg stretching left forward and lowering; jumping down with quarter turn.

12. In bent-hang with reversed grip : Lowering to stretch-hang.
13. From side-stand behind the bar: Jump to swinging in hang with ordinary grip and after the second (third) rear-swing jumping down.
14. From side-stand behind the bar: Jump to moderate swinging in hang with ordinary grip and with the second fore-swing jumping down forward with quarter turn.

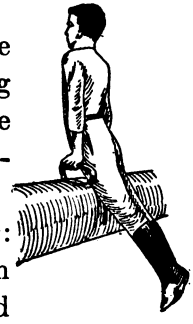


FIG. 34.

SWISS BOOM

TENTH YEAR

Boom : Hip High

Starting position : Side-stand forward with grasp on pommels.

FIG. 35.

1. Jump to rest (Fig. 34) (repeat); also with inter-jump.
2. Kneeling left between pommels (Fig. 35) (repeat); also with inter-jump.
3. Kneeling with both legs (repeat) ; also with inter-jump.

ELEVENTH YEAR

Boom : Hip High

The same starting position as for the tenth year.

1. Jump to rest with flinging left leg outward and resting left foot on boom (repeat); also with inter-jump.
2. Squatting-mount left between pommels (repeat); also with inter-jump.

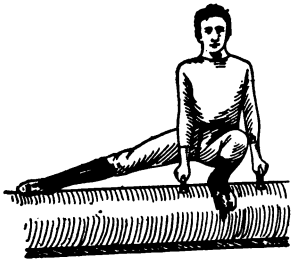


Fig. 36.

3. Kneeling-mount on both knees; jumping down forward (daring jump).
4. Squatting-vault left to sitting on left thigh; squatting dismount to stand (repeat); also with inter-jump.
5. From squatting-mount position of both legs: Inter-jump to the same position (repeat); leg stretching forward to jumping down.
6. Squatting-vault (releasing of grasp only after stretching of legs).

TWELFTH YEAR

Boom : Hip High

Starting position as in tenth year.

1. Squatting-mount left between pommels with

resting of right foot on boom (leg stretched) (Fig. 36) (repeat); the same with inter-jump.

2. Squatting-mount between pommels; leg stretching forward left; alternate leg stretching (repeat); jumping down forward.
3. After short running start squatting-vault to sitting position; jumping down forward.
4. After short running start squatting-vault (executed like preceding number 6).
5. Jump to momentary rest with flinging left leg outward (repeat).
6. Flinging left leg outward to straddle-mount beside the pommels (Fig. 37); dismounting left sideward.

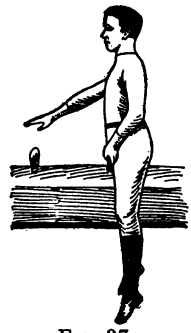


FIG. 37.

EXERCISES OF POSTURE ON APPARATUS

SWISS BOOM, HORIZONTAL BAR

Knee to hip high

These exercises may be used at liberty in place of the second part of the free standing exercises. The number of pupils to work simultaneously depends on the available apparatus and then on the exercises, whether they are to be executed

from side or cross-stand with the necessary interval of at least one step from pupil to pupil.

Tenth Year

(Body leaning against boom, hands on hips.)

1. In side-stand forward : Trunk stooping ; also trunk bending forward.
2. In side-stand backward : Trunk bending backward.
3. In cross-stand : Trunk bending left sideward.

Eleventh Year

(Body leaning against boom.)

1. In side-stand forward with arm bending upward (forward, neck-rest, or stretch position) : Trunk stooping (also bending forward).
2. In side-stand backward with arm position as in exercise 1: Trunk bending forward.
3. In cross-stand with arm positions as in exercise 1: Trunk bending left sideward.

Twelfth Year

(Body leaning on boom, hands on hips.)

1. In side-stand forward: Left leg raising backward with trunk lowering (bending) forward.

2. In side-stand backward : Left leg raising forward with trunk lowering backward.
3. In cross-stand : Right leg raising sideward with trunk lowering left sideward.

Parallel Bars

The exercises in fall-hang position described on horizontal bar may also be executed on parallel bars.

Tenth Year

Bars: Hip to Chest High

1. From side-stand outside : Jump to rest (repeat) : also with inter-jump.
2. From cross-stand : Jump to rest (Fig. 38) (repeat) ; the same with inter-jump.
3. From cross-rest : Change of side- and cross-rest position by inter-jump with quarter turn.
4. Swinging in rest and at the first rear-swing jump downward.

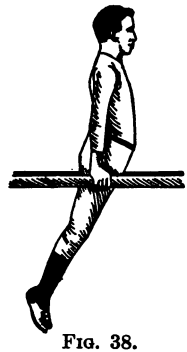


Fig. 38.

5. From side-stand inside : Rest on the front bar ; trunk lowering forward with firm grasp of hands and support of legs on rear bar (Fig. 39) (repeat).

6. From side-stand outside : Jump with quarter turn right to outer-cross-mount in front of right hand, grasp on both bars (Fig. 40).

FIG. 39.

Eleventh Year

Bars : Hip to Chest High

1. From side-stand outside : Jump with quarter turn left to outer-cross-mount in front of left hand ; inter-jump to same (or opposite) position.

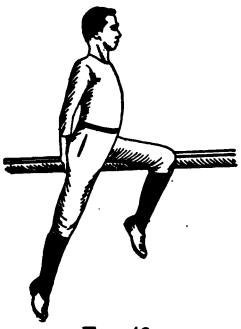


FIG. 40.

2. From side-stand outside : Outer-cross-mount as in 1; leg swinging forward and rear-swing to jump downward.
3. From the side-stand inside : Jump to rest on the front bar; trunk lowering forward with firm grasp of hands and support of legs on rear bar ; head twisting left ; head twisting forward ; trunk raising.

4. Swinging in rest and at the second rear-swing jump downward.
5. Swinging in rest and at the second forward swing straddle-mount in front of right hand (Fig. 41) ; rear-swing to jump downward.

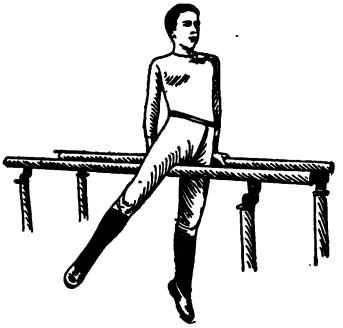


Fig. 41.

6. From side-stand inside : Sitting on rear bar ; trunk lowering backward with firm grasp of hands and instep-support of legs on front bar (repeat) (Fig. 42).
7. Swinging in rest ; at the second fore-swing straddle-mount in front of both hands ; rear-swing to jump downward.
8. Swinging in rest ; at the second fore-swing

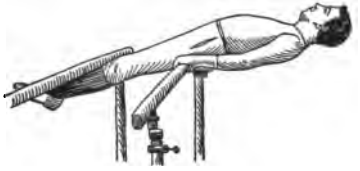


Fig. 42.

straddle-mount in front of left hand ; inter-swing to straddle-mount in front of right hand ; dismounting right sideward.

Twelfth Year

Bars: Hip to Chest High

1. Swinging in rest and at second fore-swing outer-cross-mount in front of left hand; jump downward left sideward.
2. Swinging in rest and at the second fore-swing front-vault left (Fig. 43).
3. From side-stand outside: Outer-cross-mount in front of left hand; inter-swing to same mount in front of right hand; inter-swing to front-vault.

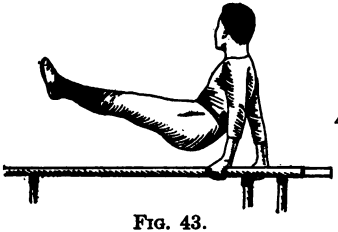


Fig. 43.

4. From side-stand inside: Jump to rest on front bar; trunk lowering forward with support of leg on back bar; trunk bending forward with arm bending upward; trunk stretching; grasping and trunk raising; jump downward with quarter turn right; straddle-mount in front of left hand; change to straddle-mount in front of right hand; inter-swing to front-vault left.
5. Swinging in rest and at the second rear-swing straddle-mount in rear of left hand; inter-swing to straddle-mount in rear of right hand; dismounting right sideward.

6. Swinging in rest and at the second rear-swing rear-vault left (Fig. 44).
7. Swinging in rest and at the second rear-swing straddle-mount in rear of both hands (Fig. 45); inter-swing to rear-vault left.

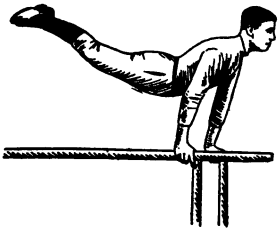


Fig. 44.

8. From side-stand inside: Sitting on the rear bar; trunk lowering backward with arm bending upward (or arm raising sideward) and support of legs on front bar.

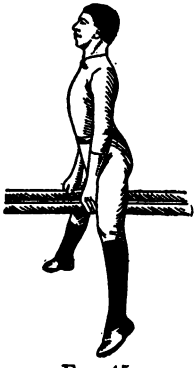


Fig. 45.

9. Swinging in rest and at the second rear-swing straddle-mount in rear of both hands; releasing grasp with slight trunk lowering forward, pressing of heels against and underneath bars; grasping and swinging in rest, at second rear-swing rear-vault left.

Stall Bars

Tenth Year

1. In cross-stand with grasp of the inner hand on one bar:
   (*a*) Change of toe stand and deep knee flexion.
   (*b*) Knee raising left.
   (*c*) Leg raising left forward (sideward, backward).
2. From side-stand forward: Climbing upward and downward (left hand and right leg simultaneously, then same with right hand and left leg).
3. In side-stand backward with left foot on third bar, hands on hips (Fig. 46): Knee bending right (repeat).

Fig. 46.

4. From side-stand forward on second bar:
   (*a*) Downward jump (firm grasp) (repeat).
   (*b*) As in (*a*) with inter-jump (repeat).
5. In backward hanging position on upper bar: Change of standing (heels) and hanging position on one bar.
6. As in 5, but in hanging position forward (toward apparatus).

7. In cross-stand on third bar, left foot on bar and left arm bent : Leg and arm raising right sideward with arm stretching left (Fig. 47) ; downward jump right sideward (left hand keeps grasp).
8. As in 7, but from higher bar and releasing grasp at jumping.
9. In side-stand forward with grasp shoulder high: Change of toe and heel stand (also knee raising left).

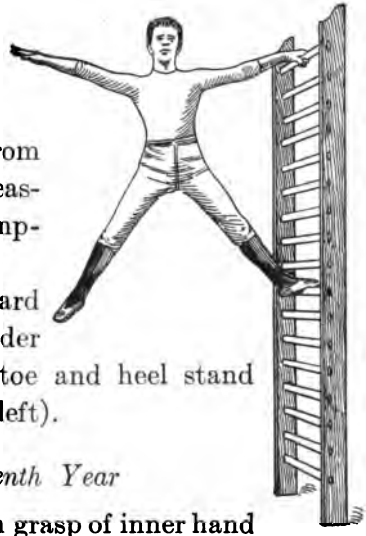


FIG. 47.

Eleventh Year

1. In cross-stand with grasp of inner hand on one bar :
   (*a*) Knee raising left with toe stand right.
   (*b*) Leg raising left forward (sideward, backward) with toe-stand right.
   (*c*) Leg raising left forward (sideward, backward) with knee bending right.
2. In side-stand backward left foot on third bar, hands on hips (bend, neck-rest, stretch positions of arms) : Knee bending right.

3. From side-stand forward on one bar, left foot on bar in support of body:
   (*a*) Jumping backward downward (with firm grasp) (repeat).
   (*b*) As in (*a*) with inter-jump (without and with change of support).
4. In backward hanging position on upper bar: Knee raising left.
5. In forward hanging position on upper bar: lower leg raising left.
6. In side-stand forward on one bar or on the floor with grasp shoulder high: Knee bending (knee outward, leaning against apparatus; body should not leave apparatus, should be upright and not fall backward, elbows kept sideward, chest close to apparatus).
7. As in 6 and trunk stooping (bending backward) while knee stretching, at the same time arm stretching.
8. In cross-standing with support of left foot (left knee bent) and hands on hips:
   (*a*) Trunk bending right sideward.
   (*b*) As in (*a*) with bend (neck-rest) position of arms.
9. From side-stand backward: Front-leaning-rest with placing of feet on stall bars, body horizontal.

Twelfth Year

1. In cross-stand with grasp of inner hand on one bar:
   (*a*) Leg raising left backward with trunk lowering forward.
   (*b*) Leg raising left forward with trunk lowering backward (eyes upward).
2. In backward hanging on upper bar: Leg raising left forward.
3. In forward hanging on upper bar: Lower leg raising. (Raising to be executed rapidly, lowering slowly.)

Fig. 48.

4. In side-stand forward on fourth or fifth bar with left foot on bar and grasp shoulder high:
   (*a*) Knee bending left.
   (*b*) As in (*a*), but while knee stretching trunk stooping (trunk bending backward) and at the same time stretching of arms.
5. In cross-standing with left foot on bar (both legs straight) and hands on hips:
   (*a*) Trunk bending right sideways.
   (*b*) As in (*a*), with bend (neck-rest) position.

6. In side-stand forward, left foot on bar and hands on hips: Knee bending right with trunk lowering backward (Fig. 48).
7. From side-stand backward : Stoop fall position with feet on stall bars ; head twisting left.
8. *Span-bending.*

(*a*) From side-stand backward : The following exercises are performed with the pupil

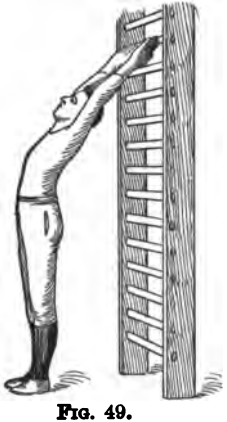


Fig. 49.

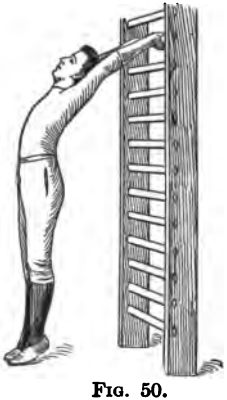


Fig. 50.

first at a distance of one foot, then increasing distance to three feet: Arm raising forward-upward and trunk bending backward with touching of index finger on one bar (span-bending) (Fig. 49) (the body falls backward, the point of gravity is in rear of heels, fingers and wrists straight, strong pressure against bar) ; trunk bending forward downward.

(*b*) As in (*a*), but with grasp on one bar, whereby the wrist is bent slightly backward (grasp either on bar which was touched with the index (exercise (*a*)) or one bar lower); trunk bending forward downward.

(*c*) As in (*a*) and (*b*) in stride position: Trunk bending forward downward.

(*d*) As in (*a*) to (*c*) heel raising (Fig. 50); lowering; trunk bending forward downward. Exercises (*a*) to (*d*) should be repeated frequently in the higher grades. To make span-bending effective, an absolute careful and exact execution is necessary. Faulty execution is harmful and even dangerous.

Long Bench (Swiss Boom)

Tenth Year

A. Balance Exercises

(On reverse bench or balance beam.)

In beginning, the exercises are practiced on 4 benches or balance beams, whereby the pupils join hands. Gradually the grasp can be omitted.

1. Follow step forward.
2. Balance walk forward and backward.
3. Balance walk forward with pointing toes of same foot before stepping.
4. Walking sideways (pupils face each other

and each pair joins hands for preparatory walking).

B. Jumping over the Bench or Swiss Boom

The pupils (4, 6, 8) are assembled in side-stand forward with joined hands.

5. Stepping left on bench and jump down forward, the same on the next bench while the second 4 (6, 8) step on the first bench (beam), etc.
6. Two (3) starting steps and jump over the bench.

Essential Bench Exercises (Boom)

7. In straddle-mount on bench:
   (*a*) Trunk stooping (trunk bending backward).
   (*b*) Trunk bending left sideways.
   (*c*) Trunk turning left.
8. In cross-stand, left foot on bench, legs stretched: Trunk bending right sideward.
9. Front-leaning-rest with rest of hands on bench.

Eleventh Year

A. Balance Exercises

1. Follow step backward.
2. Walking backward with pointing toes of same foot before stepping.

3. Balance walk forward and backward.
4. Pointing toe left forward ; lowering to the whole sole ; also right.
5. Leg raising left sideward (high) ; front-step left ; also right.

B. Jumping over the Bench (Swiss Boom)

6. Mounting left with leg raising right backward ; jump down forward.
7. Front-step left and immediately jump over bench.

C. Essential Bench Exercises (Boom)

8. In straddle-mount on bench with bend (forward) or sideward position of arms:
   (*a*) Trunk stooping (trunk bending backward).
   (*b*) Trunk bending left sideways.
   (*c*) Trunk turning left.
9. In cross-standing with bend position of arms, left foot on bench, legs stretched : Trunk bending right sideward.
10. In side-stand, left foot on bench : Trunk bending backward (trunk stooping (bending) forward). If foot is planted on whole sole, the knee is bent slightly ; otherwise both legs are stretched.
11. Side-leaning-rest with rest of left hand on bench.

Twelfth Year

A. Balance Exercises

1. Balance walk forward and backward, also with arm movements.
2. Walking with alternate knee bending and stretching of standing leg (minuet step).
3. Knee raising left ; leg stretching left forward ; stepping, etc.
4. Walking right sideward with follow step left to left knee bending.

B. Jumping over the Bench (Boom)

5. Three (four) starting steps and jump over the bench.
6. Jump from both feet over the bench.

C. Essential Bench Exercises (Boom)

7. In straddle-mount on bench with neck-rest (stretch) position of arms : Trunk bending left sideways.

Fig. 51.

8. In cross-stand with stretch position of arms, left foot on bench, legs stretched : Trunk bending right sideways.
9. In side-stand with stretch (neck-rest or for-

ward) position of arms, left foot on bench : Trunk bending backward; trunk stooping (bending).

10. Back-leaning-rest with rest of hands on bench (Fig. 51).
11. Change of front-, side-, and back-leaning-rest by turning.

D. ATHLETICS

The method of athletic training in schools must aim at an effect upon the mass, not the individual.

The *Manual of Physical Training of the United States Army* expresses the spirit in which this training ought to be given and taken, in the following excellent words : "Athletic training should have an applicable value, be educational, and not spectacular, *for it is the ability of the average of the mass that determines the efficiency of a unit of men.*"

1. JUMPING

Jumping offers exercises of practical use in civil life as well as in military service. Therefore, the main object of this part of training must be the clearing of obstacles such as would confront us in the field. To gain this end a careful, systematic training and a constant practice are necessary.

Suitable exercises of training in jumping must therefore be twofold, first those of *schooling* and second those of *applied jumping.*

Preceding the first are preparatory exercises to be used between free-standing exercises. In schooling we should not look for great stunts, but correct performance of exercises. The practical jumping will subsequently show the bodily and mental abilities acquired by schooling.

Only by constant practice is one able to increase his skill in jumping ; and it is, therefore, essential to have it in some form, either broad or high jump, as a basic part of every gymnastic lesson.

Success in jumping depends on the correct performance of starting, take-off, vaulting, and landing. *For broad jump* the following rules should be *strictly* observed :

In starting, run straight ahead, with steady paces, gradually increasing in rapidity until reaching the height of velocity during the last two or three steps, directly before the take-off. Do not run more than 30–40 feet, and leap off with one foot. Jump without hesitation, so as to make the start and jump appear as of one continuous motion. In jumping, one leg fixes, by strong flinging forward, the height and form of the flight, which must not be too flat. The other leg is to be brought up quickly, so that both legs will land simultane-

ously. The arms during the starting run should support the advance movement and swing forcefully forward while jumping. The landing must always be with deep knee bending and stretching.

For *high jump* with leaping off from one foot, a starting run of 5–6 paces is sufficient. The running is to be performed with elastic steps, not flat-footed. In jumping, the free leg swings upward while the other is pulled up to same height as quickly as possible ; at the same moment the arms are swung forward and upward. After clearing the obstacle, the legs are brought together and the body stretched from the former contracted position while vaulting.

It is absolutely necessary that in all jumping the landing takes place on the ball of the foot, the feet being joined as in position of attention. So as to get used to landing steadily and with knee bending, the pupils should in the beginning remain in knee bending position with arms raised forward, the stretching to be performed by command.

No jumping board should be used ; but the mark at which the jumping begins is to be distinctly visible so as to enable the jumpers to estimate distances easily. Pupils are limited to a take-off at exactly the marked place. For the jumping exercises a soft landing place must be provided in all practice grounds. It not only protects the

jumpers from landing with a jarring force but also prevents slipping. The position for the class has to be chosen so as to enable each pupil to observe easily the other performers ; it is, therefore, advisable to form a line parallel to the jumping cord.

The facilities for jumping should allow a large number of pupils to practice simultaneously. If the capability varies much, the cord or boom may be placed in inclined position, *i.e.*, higher on one side.

A. SCHOOLING

Preparatory exercises are found among free-standing exercises.

(*a*) *Broad jump :* Two cords on the ground, two tapers, two furrows, or two lines mark the place of the take-off and the end of the jump ; in the gymnasium two mats are used, one to jump off, the other to land on. The landing place must be soft.

1. Standing high jump, 24–32 inches (trunk in stooping position).
2. With running start of two or three steps, beginning left or right, 32–48 inches.
3. Running start six steps, leaping with either foot 48–60 inches, also with longer starting run. Use this exercise as competitive work.

(*b*) *High jump,* on jump stand with cord, or balance beam (4 inches lower).

1. Standing high jump, 16 inches (knee raising) (Fig. 52).
2. From position, after a short jump forward, jump with closed feet 20 inches.
3. Two or three steps running start, beginning left or right, take-off from either foot, 16–20 inches.
4. Running start about 20 feet and leaping off with either foot, 20–24 inches.

FIG. 52.

B. APPLIED JUMPING

(*a*) *Broad jump:*

1. Standing broad jump across a ditch, path, or creek. Width of ditch 24 inches.
2. The same, but take-off from one foot and a starting run of 20 feet. Width of ditch 40 inches.

(*b*) *High jump:*

1. Standing high jump on the Swiss boom,

the long bench (Swedish), slope of road, height 20 inches.

2. As in 2 but after short running start and take-off from either or both feet, 24 inches.
3. After short running start and take-off from either or both feet, jump over the boom with momentary rest on boom with the other foot, height 20 inches.
4. Standing high jump over Swiss boom, balance beam, over a hedge, etc., height 12 inches.
5. After short running start and take-off from either or both feet, jump over the boom, balance beam, a hedge, etc., height 20 inches.

(*c*) *Deep jump:*

1. From standing mount on Swiss boom, jumping down forward, height 32–36 inches ; also from a slope of a road.
2. With running start from a slope of a road and take-off from either or both feet.

2. Running

Here we mention the *endurance run* and the *sprint race* (dash).

Endurance run in tracks (cinder or grass-path): By a careful increase of requirements the action of heart and lungs is schooled and their proficiency

advanced. To enliven the somewhat monotonous exercise, a sound spirit of ambition has to be developed. Here are some points of advice:

1. The runner, with due regard to the length of the distance, should not set in with the height of power.
2. He should regulate his respiration (breathe slowly and through nostrils).
3. Paces must be long and uniform.

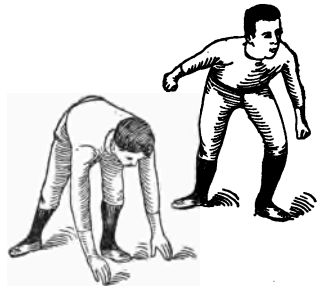


FIG. 53.

Competitive running races (dash or sprint) *over short distances* (30–50 yards): Competitive running is useful, because the entire exertion of one's ability is generally produced with other participants of equal training.

To obtain an undisturbed contest it is best to fix the direction each runner has to take by placing pupils, flags, or sticks in the respective places behind the finishing line. Due regard must be given to the start (stooping) (Fig. 53), and to a finish with undiminishing velocity. After racing, quiet, comfortable walking leads back to normal action of the heart and lungs. Should a

boy's practice of running be interrupted by sickness or other causes, he returns to running exercises by moderate requirements.

Return race: The teacher can here control start and finish, while for the preceding exercise he entrusts a pupil with the finishing line.

Racing in pairs with joined hands: Also in return race.

To determine the best runner: The pupils run in groups of six to eight. The first ones reaching the finishing line decide the winner among themselves in a new race.

To determine the rank of runners: Return race of four pupils each. The first classification takes place according to the height of the pupils. (Marching column.) The best runner receives 4 points, the last one 1 point. Classify by same number of points. During the same lesson not more than two races are advisable. Each pupil running from 4–6 times and adding his rating will furnish the desired classification.

Circular chase: The class forms a circle (of about 10 yards diameter), faces inward, divided into groups of 4, 5, 6 pupils. At the command: First group! (second, third, etc.) the pupils of that group step with one step out of the circle and according to the order face left or right in flank position. At the command: Go! every one runs

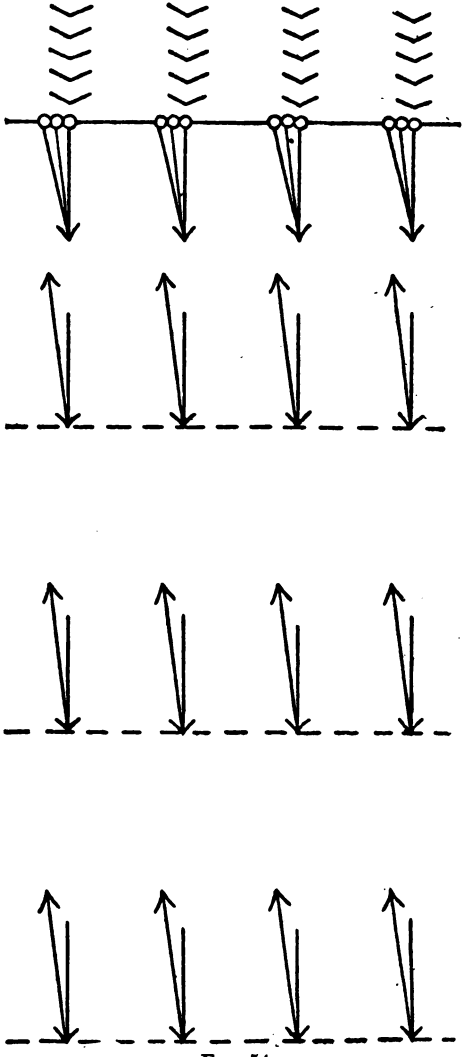


FIG. 54.

as often around the circle as indicated by the teacher. In running, every pupil tries to reach the one running in front of him and with a slight touch (not push) to put him out of the game, while on the other hand trying himself to escape the pupil in the rear.

Relay race (Fig. 54): The class is divided in groups of 4 to 6, the front ones standing on the starting line (sideward open marching column). Every runner has 3 balls (stones, sticks, etc.) at disposal. In distances of 5, 10, 15 yards ($7\frac{1}{2}$, 15, $22\frac{1}{2}$) the lines are drawn. At the signal: Go! each of the 4 to 6 runners picks up one of his three balls, carries it to the first line, places it, runs back, picks up the second ball, carries it to the second line, the same way the third to the third line, and then he runs back. The best runner is honored by the teacher calling the name. The rotation of lines, on which the deposit takes place, can be given free. The next group runs in similar manner to bring the balls back. It is also interesting to establish which rank contains the most winners.

Number race: Open groups of 4 to 6 pupils (open column of march) take distance of 2–3 yards in rear of one another and are counted off by numbers. If the teacher calls a number (for instance 5), the pupils of this group run backward to the left along the file in which they stand, then

around the last pupil, ahead again along the right of the row, around the first pupil, back to their place. The first one to reach his place is the winner. The first and last pupil of each file must keep their exact places ; they may aid the runners by grasping their hands in turning around.

3. Throwing

Throwing exercises are an excellent school for eye and hand and pupils delight in their practice. They are indispensable for ball playing. To save time the throwing takes place against another group or a wall.

Fig. 55.

Fig. 56.

Fig. 57.

A. Exercises with the small hand ball

Exercises as in Course I with greater distances between practicing pupils. (See Figs. 55, 56, 57.) The thrower tries, by careful consideration of the

distance, to throw the ball chest or head high towards the partner. See Figs. 58, 59, 60. The partner moves forward, backward, or sideward, rises on his toes, jumps up, or bends down in order to catch the ball.

Competitive far throwing: Increase distance of front lines. Pupils not reaching the other line with their throw are eliminated. If wind is blowing, the throwing should be in the same direction (by east wind throw is to incline to the east).

FIG. 58.

FIG. 59.

Throwing to a wall: Form groups of 4 to 8 pupils. Mark circles on wall (diameter 32–400 inches with cord and chalk), which serve to determine number of hits. With several concentric circles a grading by points is possible. The distance shall be increased according to the ability of the pupils.

Batting the ball (Fig. 61): This exercise is of fundamental importance for baseball and is recom-

mended for constant practice. (Paper-balls.) The batter takes stride position vertical to direction of hit. It is advisable to fix a time measure to which pupils must become accustomed: Bringing bat in position, pitching and hitting. (For instance: Bat lowered — 1: Raise it to height of shoulder, 2: Lower it and guide it backward,

Fig. 60.

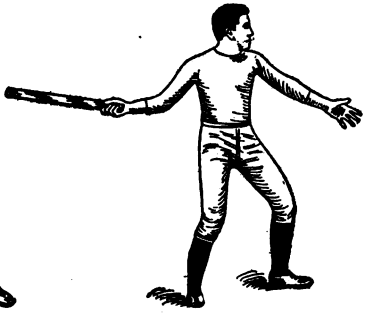


Fig. 61.

between 2 and 3 at the word "and" throw ball with the other hand obliquely forward upward, and at 3: Strike! — 1! 2! *and* 3!)

In missing hits the pupil should watch whether the bat goes under or over the ball; in the former case the throw has to be lower, in the latter higher. For practice the pupils are formed into parties of 4–8. One pupil bats, another holds the balls ready, and the rest catch. Of advantage is when several balls are pitched and batted in immediate succession.

B. EXERCISES WITH THE LARGE BALL

Throwing and catching : The exercise is practiced with small groups catching and throwing, while facing each other. If only two balls are available, it is advisable to do also some other exercises. The position to throw is taken by a front-step left and quarter turn right, knee and trunk bending sideways (Fig. 62) ; the arm is stretched, the ball then forced against the fore-arm by strong bending of wrist. The inclination of the flight to be moderate. Throwing should also be practiced with a running start of 3 steps. Do not catch with hands only (injuring fingers), but use bent arms raised against chest or thighs (Figs. 63 and 64). It is important to be in favorable position at the approach of ball. Jumping up or deep knee bending may be used with advantage.

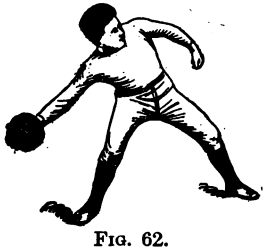


FIG. 62.

4. PULLING AND PUSHING

1. *Catch and pull tug of war:* Any number of players may engage in this contest, which is one of the best for a large number, containing as it does both excellent sport and vigorous exercise.

A line is drawn down the middle of the playing space. The players are divided into two parties and stand one party on either side of the line. The game starts on a signal and consists in catching hold of an opponent by any part of his body, as hand, arm, or foot, reaching over the line and so pulling him across the boundary. Any number of players may try to secure a hold on an opponent, and any number may come to his rescue and try to resist his being pulled over the line, either by pulling him in the opposite direction or by trying to secure a hold on one of the opponents.

FIG. 63.

A player does not belong to the enemy until his entire body has been pulled over the line. He must then join his captors in trying to secure players from across the line. The party wins which has the largest number of players at the end of time limits.

FIG. 64.

2. *Tug of war:* The strength of the parties depends on the length of the rope, inasmuch as every participant has to have comfortable space. The center of the rope is to be marked (colored ribbon) and is at the beginning of the contest over a line scratched in the ground.

The party pulling the whole enemy party across it is the winner. The contest becomes clearer if flags are placed on both sides in the continuation of the rope and at the same distance. This flag must be grasped by the outer man of a party. After a war, the parties may be doubled by combining a group each of winners and losers. The weaker ones must hold the rope despite threatening defeat ; a sudden let go is treacherous and dangerous and therefore forbidden.

5. Lifting

Lifting of horizontal bars: 1. Four pupils step to a bar lying on the ground. (Pupils in line according to their height.) The second and fourth pupil step over the bar and face about. Stride position, toes on bar. Grasping with both hands and:

(*a*) 1. Lifting chest high ; 2. Lifting to stretch position ; 3 and 4 reverse movement. Movements 2 and 3 may be repeated.

(*b*) The same with grasp of one hand (free hand on back).

Exercises (*a*) and (*b*) may be executed by three pupils.

2. Four or three pupils step to the bar (same side).

(*c*) As in (*a*).

(*d*) As in (*b*).

(*e*) As in (*a*) at count 3, lowering to reach position.

(*f*) As in (*a*) at count 1, lifting to reach position.

(*g*) As in (*a*) at count 1 and 3 to reach position.

3. Four or three pupils step to the bar, face left and take stride position. They grasp the bar by knee bending right and reversed grip.

(*h*) 1. Lifting to shoulder height; 2, lifting to upward position ; 3 and 4 reverse movement. Movements 2 and 3 may be repeated. Half turn and the exercise alternately.

(*i*) As in (*h*) 1 and 2, then the left hand grasps the bar, 3 lowering to left shoulder and 4 to downward position left.

4. Six to four pupils in flank line between two bars, grasping both bars and

(*k*) as in (*h*).

Lifting of iron rods: Lifting of two rods by one pupil: Exercises *a, e, f, g.* Lifting of two rods by two pupils: Exercises *h* to *k.* Lifting of three rods by two pupils : Exercises *c* to *g.*

6. Climbing

While the exercises on climbing poles were treated formally in the exercises on apparatus, we mention them here as a form of motion applied

instinctively when the body is to be moved upward on vertical or inclined objects whereon hands and feet can grasp a hold. The climbing-clinch is thus of natural aid. Moderation is first rule in climbing, because the strain is liable to cause overexertion and fatigue, whereby the danger of falling down arises. By "traveling," the arms alone perform the upward move of the body, the large districts of muscles of trunk and legs do not take part in it. (This exercise of strength does not find much use in practical life.)

Climbing on trunks of trees of moderate thickness, columns, wooden or iron poles, on masts and tows.

Determining the best climbers: The winners of different parties come in for a final test. The results may also be obtained by a stop watch.

7. Preparatory Exercises for Swimming

The motions of swimming may be divided into two groups: The bending and the pushing off of arms and legs. The motion is not as simple as it appears to be. To insure a moving forward of the body, an abundant, slow motion to the rear is necessary. The main movement for the arms is bending, for the legs — stretching. The latter takes more time. The legs remain stretched while the arms already begin the extensive motion of bending, and vice versa, the arms are al-

ready stretched when the legs have to complete their outreaching stretch motion. It is in this unsimultaneousness that we find the difficulty. It cannot be overcome when whole classes are bathing, because the pupils must know exactly the playing together of the movements before they can expect success in the water. This preparation is known by the term "dry swimming," and bears the task to bring about unconscious execution of the swimming motion. Such exercises may take the place of free-standing exercises.

FIG. 65.

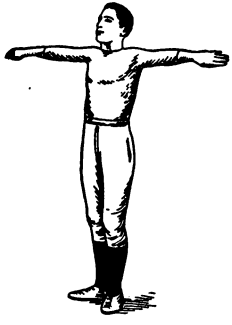


FIG. 66.

A. ARM EXERCISES

Starting position: Arms bent in front of chest, palms downward, index fingers touching each other (Fig. 67, p. 160).

1. Arm pushing forward (Fig. 65).
2. Remain in this arm position (meanwhile the movements of closing the legs take place).
3. Slight hand turning outward and change to sideward position (Fig. 66).

4. Arm bending to front of chest (starting position). Time : 1 ! 2 ! 3 ! 4 ! The arm exercise also in trunk stooping position, and also in two counts :

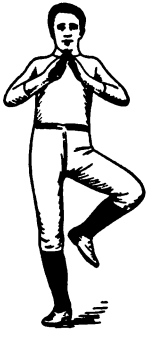


Fig. 67.

O—n—e ! motion 1 and remain (exhaling !).

T—w—o ! motion 3 and 4 (inhaling !).

B. LEG EXERCISES

Starting position : Left knee raised obliquely forward, heel on right thigh (Fig. 67).

1. Leg pushing left sideward, foot bent (toes drawn) (Fig. 68).
2. Leg lowering.
3. Remain (meanwhile the sideward motion of arms takes place).
4. Knee raising to starting position. Also in counts :

   O—n—e ! motions 1 and 2.

   T—w—o ! remaining and motion 4.

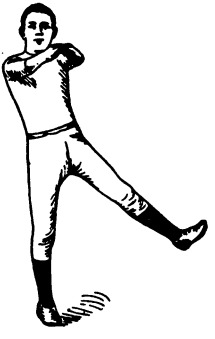


Fig. 68.

Leg exercise also on :

(*a*) Horizontal bar or ladder in hanging position.

(*b*) In lying backward.

(*c*) 1. Deep knee bending, 2. Jump to stride position, 3. Jump to normal position.

(*d*) From front-leaning-rest : 1. Jump to squatting stand, 2. Jump to leaning-rest with legs straddled, 3. Leg closing.

C. COMBINING ARM AND LEG EXERCISES

Starting position as in *A* and *B* (Fig. 67).

The leg exercise is performed by one leg only :

1. Leg and arm pushing } exhaling
2. Leg lowering }
3. Change to sideward position. }
4. Knee raising, arm bending in front of chest } inhaling

These exercises also in two counts :

O—n—e! movement 1 and 2.

T—w—o! movement 3 and 4.

Afterwards in quicker time, and also according to leg exercises *b* and *c*, and in lying on a bench (Fig. 69), balance beams, and in a belt. Apparatus consisting of a chest and a two-part leg belt are of good use.

FIG. 69.

E. GAMES

Chasing the Ball

a. Two parties facing each other: Two equally strong front lines face each other at 4–10 steps and pupils two arm lengths apart from one another. In each line count off in twos, so that a number one faces a number two. Each party receives a basket ball ; for instance, the guide right of the one line the ball for the ones and the guide

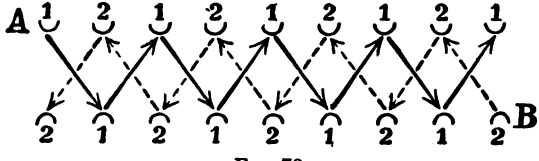


Fig. 70.

left of the same line the ball for the twos, if the number of pupils in one line is even ; if uneven, the last pupil of the other line receives the ball for the twos. At a given signal the two balls are started from opposite ends of the lines and travel in zigzag from the twos of one line to twos of the other line and the other ball from the ones of one line to the ones of the other line (Fig. 70).

The party bringing their ball first back again to the starting place is the winner. In throwing the ball no pupil must be skipped ; only the throw from the designated place counts, and nobody

should try to prevent the opponent throwing or catching the ball. The party violating this rule is the loser of the game. Each party can be given the opportunity to practice the game separately.

b. In circle: The participants stand either in stride position, so that the feet touch each other, or in normal position two arm lengths apart. Count off in twos, whereby the parties of ones and twos are formed. At the beginning of the game the balls are in the hands of two players, who face each other in the circle. At a given signal the balls are started traveling in the same direction but so that the ones only shift their balls and the twos theirs. The winner is the party whose ball overtook the other.

The rules of throwing and catching are the same as in *a*.

A preparatory form of the game would be to send the balls around once only, either in the same direction or in different ones. The winner is the party whose ball reaches first starting place.

Boundary Ball

It is the essential contest of this course and requires team work. Insist on a suitable array of the players and do not permit some pupils to monopolize the game.

The ground (Fig. 71, p. 164) is about 84 yards

long and 40 yards wide, rectangular, clean, and level.

At the corners and in the center of the longer lines a stake is placed, dividing the place in two equal fields, each one of them assigned to a party.

In the center of the shorter lines two longer stakes are placed, 6 yards apart, which form the goal the other party tries to take.

The goal is won, if the attacking party succeeds in throwing the ball between the stakes and in

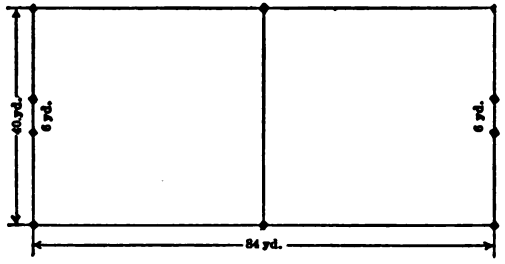


FIG. 71.

the rear of the line. The group winning three such throws is the winner of the game. Where — it should be so everywhere — the parties are always the same, an unfinished game may be continued the next day.

For this game a basket ball may be used. After the tossing of a coin decided which party should have the first throw, its leader steps 10 paces from the center and throws the ball over the heads of

the opponents as near as possible to the enemy goal.

1. During the game the following players are permitted to throw:

   (*a*) The one succeeding in catching the ball is entitled to 3 steps running start;

   (*b*) The one succeeding in pushing the ball back while in the air (only permitted with hollow ball) throwing from the place where the pushed ball rolled to. The opponents must not stop the ball. In small places the rule may be changed and the ball thrown from the place in which it touched the ground.

2. If the ball flies across the longest boundary or outside the goal, it is thrown by the other party at an imaginary parallel to the center line, drawn through the point where the ball crossed the boundary.

3. If the ball flies through the goal and is caught outside, the catcher enters the goal and throws from there; the game continues also if a pushing back through the goal of the ball thrown through the goal succeeds.

4. After each inning the fields are changed and the leader of the defeated party starts the game anew.

If played without a goal, the game is decided whenever the ball drops behind a boundary line.

If the ball is caught across the line or bounced back, the game continues.

For other games we refer to Jessie H. Bancroft's *Games for the Playground*, where the following games are described :

Tag. Catch and Pull Tug of War. Three Deep. Relay Ball in Line.

COURSE III

FOR PUPILS FROM THE THIRTEENTH TO THE FIFTEENTH YEAR

COURSE III

A. MARCHING AND RUNNING[1]

School of the Squad

Scholars are grouped into squads for purposes of instruction, discipline, control, and order. The squad consists of 8 pupils, 4 of whom form a front rank and 4 a rear rank (in the company a corporal is the guide of a squad of 7 privates).

To form a squad, the instructor places himself three paces in front of where the center is to be and commands : ***FALL IN.***

The pupils, assembled at attention, are arranged in double rank as nearly as practicable in order of height from right to left, each pupil dropping his left hand as soon as the pupil on his left has his interval. The rear rank forms with a distance of 40 inches.

The instructor then commands : ***COUNT OFF.***

At this command all except the right file execute ***eyes right,*** and beginning on the right, the pupils

[1] Taken from the *Infantry Drill Regulations, United States Army.*

in each rank count ***one, two, three, four;*** each pupil turns his head and eyes to the front as he counts.

The Rests

Being at a halt, the commands are as in Course II: Fall out; Rest; and 1. ***Parade,*** 2. ***REST.***[1]

Carry the right foot six inches straight to the rear, lef tknee slightly bent; clasp the hands without constraint in front of the center of the body, fingers joined, left hand uppermost, left thumb clasped by the thumb and forefinger of the right hand ; preserve silence and steadiness of position.

To resume the attention : 1. ***Squad,*** 2. ***ATTENTION.***

The pupils take the position of attention.

The Oblique March

For instruction, the squad being in column or correctly aligned, the instructor causes the squad to face half right or half left, points out to the boys their relative positions, and explains that these are to be maintained in the oblique march.

1. ***Right*** (***left***) ***oblique,*** 2. ***MARCH.***

Each pupil steps off in a direction of 45° to the right of his original front. He preserves his relative position, keeping his shoulders parallel to those

[1] This last exercise to be taken in connection with wand exercises.

of the guide (the pupil on the right front of the line or column), and so regulates his steps that the ranks remain parallel to their original front.

At the command ***HALT*** the pupils halt faced to the front.

To resume the original direction : 1. ***Forward***, 2. ***MARCH***.

The pupils half face to the left in marching and then move straight to the front.

If at ***half step*** or ***mark time*** while obliquing, the oblique march is resumed by the command: 1. ***Oblique***, 2. ***MARCH***.

To Turn on Moving Pivot

Being in line : 1. ***Right*** (***left***) ***turn***, 2. ***MARCH***.

The movement is executed by each rank successively and on the same ground. At the second command, the pivot pupil of the front rank faces to the right as in marching and takes the half step; the other pupils of the rank oblique to the right until opposite their places in line, then execute a second right oblique and take the half step on arriving abreast of the pivot pupil. All glance toward the marching flank while at half step, and take the full step without command as the last pupil arrives on the line.

Right (***left***) ***half turn*** is executed in a similar manner. The pivot pupil makes a half change

of direction to the right, and the other pupils make quarter changes in obliquing.

To Turn on Fixed Pivot

Being in line to turn and march : 1. ***Squad right*** (***left***), 2. ***MARCH.***

At the second command, the right flank pupil in the front rank faces to the right in marching and marks time ; the other front-rank pupils oblique to the right, place themselves abreast of the pivot, and mark time. In the rear rank the third pupil from the right, followed in column by the second and first, moves straight to the front until in rear of his front rank pupil, when all face to the right in marching and mark time; the other number of the rear rank moves straight to the front four paces and places himself abreast of the pupil on his right. Pupils, on the new line glance toward the marching flank while marking time and as the last pupil arrives on the line, both ranks execute ***forward, MARCH,*** without command.

Being in line to turn and halt : 1. ***Squad right*** (***left***), 2. ***MARCH***, 3. ***Squad***, 4. ***HALT.***

The third command is given immediately after the second. The turn is executed as prescribed in the preceding paragraph except that all pupils, on arriving on the new line, mark time until the fourth command is given, when all halt. The

fourth command should be given as the last pupil arrives on the line.

Company and Platoon

Companies can be formed, consisting of two, three, or four ***platoons.*** A platoon can be made up of four to eight squads.

At the formation of the company the platoons or squads are numbered consecutively from right to left, and these designations do not change.

For convenience in giving commands and for reference, the designations, ***right, center, left,*** when in line, and ***leading, center, rear,*** when in column, are applied to platoons or squads.

These designations apply to the actual right, left, center, head, or rear, in whatever direction the company may be facing. The ***center squad*** is the middle or right middle squad of the company.

The designation "So-and-so's" squad, or platoon, may also be used.

The company executes the ***halt, rests, facings, steps,*** and ***marchings, takes intervals*** and ***distances*** and ***assembles, increases,*** and ***diminishes intervals,*** resumes ***attention, obliques,*** resumes the direct march, preserves alignments, as explained in the School of the Squad, substituting in the commands ***company*** for ***squad.***

Movements on the Moving Pivot

Being in line, to change direction : 1. ***Right (left) turn***, 2. ***MARCH***, 3. ***Forward***, 4. ***MARCH***.

Executed as described in the school of the squad except that the pupils do not glance toward the marching flank and that all take the full step at the fourth command. The right guide is the pivot of the front rank. Each rear rank pupil obliques on the same ground as his file leader.

Being in column of platoons, to change direction : 1. ***Column right (left)***, 2. ***MARCH***.

At the first command the leader of the leading platoon commands: ***Right turn***. At the command ***march*** the leading platoon turns to the right on moving pivot ; its leader commands : 1. ***Forward***, 2. ***MARCH***, on completion of the turn. Rear platoons march squarely up to the turning point of the leading platoon and turn at command of their leaders.

Being in column of squads, to change direction: 1. ***Column right (left)***, 2. ***MARCH***.

At the second command, the front rank of the leading squad turns to the right on moving pivot as in the school of the squad ; the other ranks, without command, turn successively on the same ground and in a similar manner.

Being in column of squads, to form line of pla-

toons or the reverse: 1. ***Platoons, column right (left)***, 2. ***MARCH.***

Executed by each platoon as described for the company.

Being in line, to form column of squads and change direction : 1. ***Squads right (left), column right (left)***, 2. ***MARCH ;*** or, 1. ***Right (left) by squads***, 2. ***MARCH.***

In the first case the right squad initiates the ***column right*** as soon as it has completed the ***squad right.***

In the second case, at the command ***MARCH,*** the right squad marches ***forward;*** the remainder of the company executes ***squads right, column left,*** and follows the right squad. The right guide, when he has posted himself in front of the right squad, takes four short steps, then resumes the full step ; the right squad conforms.

Being in line, to form line of platoons : 1. ***Squads right (left), platoons, column right (left),*** 2. ***MARCH ;*** or 1. ***Platoons, right (left) by squads,*** 2. ***MARCH.***

Executed by each platoon as described for the company in the preceding paragraph.

Facing or Marching to the Rear

Being in line, line of platoons, or in column of platoons or squads, to face or march to the rear:

1. ***Squads, right (left) about*** 2. ***MARCH;*** or, 1. ***Squads right (left) about,*** 2. ***MARCH,*** 3. ***Company,*** 4. ***HALT.***

Executed by each squad as described in the school of the squad.

If the company, or platoons, be in column of squads, the file-closers face about, close toward the column, and take their posts ; if in line, each darts through the nearest interval between squads.

To march to the rear for a few paces : 1. ***About,*** 2. ***FACE,*** 3. ***Forward,*** 4. ***MARCH.***

If in line, the guides place themselves in the rear rank, now the front rank ; the file-closers, on facing about, maintain their relative positions. No other movement is executed until the line is faced to the original front.

On Right (Left) Into Line

Being in column of platoons, or squads, to form line on right or left: 1. ***On right (left) into line,*** 2. ***MARCH,*** 3. ***Company,*** 4. ***HALT,*** 5. ***FRONT.***

At the first command, the leader of the leading unit commands: ***Right turn.*** The leaders of the other units command: ***Forward,*** if at a halt. At the second command, the leading unit turns to the right on moving pivot. The command ***halt*** is given when the leading unit has advanced the de-

sired distance in the new direction; it halts; its leader then commands: ***Right dress.***

The units in rear continue to march straight to the front; each, when opposite the right of its place in line, executes ***right turn*** at the command of its leader; each is halted on the line at the command of its leader, who then commands: ***Right dress.*** All dress on the first unit in line.

If executed in double time, the leading squad marches in double time until halted.

Front Into Line

Being in column of platoons or squads, to form line to the front: 1. ***Right*** (***left***) ***front into line,*** 2. ***MARCH,*** 3. ***Company,*** 4. ***HALT,*** 5. ***FRONT.***

At the first command the leaders of the units in rear of the leading one command: ***Right oblique.*** If at a halt, the leader of the leading unit commands: ***Forward.*** At the second command the leading unit moves straight forward ; the rear units oblique as indicated. The command ***HALT*** is given when the leading unit has advanced the desired distance ; it halts ; its leader then commands: ***Left dress.*** Each of the rear units, when opposite its place in line, resumes the original direction at the command of its leader ; each is halted on the line at the command of its leader, who then

commands: ***Left dress.*** All dress on the first unit in line.

Being in column of squads to form column of platoons, or being in line of platoons, to form the company in line: 1. ***Platoons, right (left) front into line,*** 2. ***MARCH,*** 3. ***Company,*** 4. ***HALT,*** 5. ***FRONT.***

Executed by each platoon as described for the company. In forming the company in line, the dress is on the left squad of the left platoon. If forming column of platoons, platoon leaders verify the alignment before taking their posts; the captain commands ***front*** when the alignments have been verified.

When ***front into line*** is executed in double time, the commands for halting and aligning are omitted, and the guide is toward the side of the first unit in line.

To Diminish the Front of a Column of Squads

Being in column of squads: 1. ***Right (left) by twos,*** 2. ***MARCH.***

At the command ***MARCH*** all files except the two right files of the leading squad ***in place halt;*** the two left files of the leading squad oblique to the right when disengaged and follow the right files at the shortest practicable distance. The remaining squads follow successively in like manner.

Being in column of squads or twos : 1. ***Right (left) by file***, 2. ***MARCH.***

At the command ***MARCH***, all files ***execute in place halt*** except the right file of the leading two or squad. The left file or files of the leading two or squad oblique successively to the right when disengaged, and each follows the file on its right at the shortest practicable distance. The remaining twos or squads follow successively in like manner.

Being in column of files or twos, to form column of squads ; or, being in column of files, to form column of twos : 1. ***Squads (twos), right (left) front into line***, 2. ***MARCH.***

At the command ***MARCH***, the leading file or files halt. The remainder of the squad, or two, obliques to the right and halts on line with the leading file or files. The remaining squads or twos close up and successively form in rear of the first in like manner.

The movement described in this paragraph will be ordered ***right*** or ***left***, so as to restore the files to their normal relative positions in the two or squad.

The movements prescribed in the three preceding paragraphs are difficult of execution at attention, and have no value as disciplinary exercises.

Marching by twos, or files, cannot be executed

without serious delay and waste of road space. Every reasonable precaution will be taken to obviate the necessity for these formations.

To Take Intervals and Distances

Being in line at a halt: 1. ***Take interval***, 2. ***To the right*** (***left***), 3. ***MARCH***, 4. ***Squad***, 5. ***HALT***.

At the second command the rear-rank pupils march backward 4 steps and halt ; at the command ***MARCH*** all face the right and the leading pupil of each rank steps off ; the other pupils step off in succession, each following the preceding pupil at 4 paces, rear-rank pupils marching abreast of their file leaders.

At the command ***HALT***, given when all have their intervals, all halt and face to the front.

Being at intervals, to assemble the squad : 1. ***Assemble to the right*** (***left***), 2. ***MARCH***.

The front-rank pupils on the right stand fast ; the rear-rank pupils on the right close to 40 inches. The other pupils face to the right, close by the shortest line, and face to the front.

Being in line at a halt and having counted off : 1. ***Take distance***, 2. ***MARCH***, 3. ***Squad***, 4. ***HALT***.

At the command ***MARCH***, No. 1 of the front rank moves straight to the front ; Nos. 2, 3, and 4 of the front rank, and Nos. 1, 2, 3, and 4 of the rear rank, in the order named, move straight to

the front, each stepping off so as to follow the preceding pupil at 4 paces. The command ***HALT*** is given when all have their distances.

In case more than one squad is in line, each squad executes the movement as above. The guide of each rank of numbers is right.

Being at distances to assemble the squad : 1. ***Assemble***, 2. ***MARCH***.

No. 1 of the front rank stands fast ; the other numbers move forward to their proper places in line.

B. FREE-STANDING EXERCISES

According to the principles laid down in the introduction and in conformity with the exercises of the tenth year, the suitable free-standing exercises in this course should be combined with respiratory exercises.

Thirteenth Year

Arm Exercises

1. (*a*) **Arm circling** forward (backward).
   (*b*) As in *a*, but from upward position.
   (*c*) **Arm circling** upward (downward) from forward position.
   From arm bending upward :
2. (*a*) **Arm stretching** left upward, and right downward; twice change of arm position

through forward position; **arm bending** upward.

(*b*) **Arm stretching** forward; change to upward position left and backward position right; twice change through forward position; change to forward position of both arms; **arm bending** upward (6 movements).

Leg Exercises without and with Arm Movements

3. (*a*) Knee raising left with arm bending upward; **leg stretching** left forward with arm stretching forward; **change** to backward position left with change to upward position of arms; leg lowering left with arm lowering forward.

   (*b*) Knee raising left with arm bending upward; **leg stretching** left backward with arm stretching upward; **change** to forward position left with change to forward position of arms; leg lowering left with arm lowering.

4. (*a*) **Leg raising** left backward with arm raising forward upward; fall-out left forward with arm bending upward (or arm swinging to backward position) (4 parts).

   (*b*) **Leg raising** left forward with arm raising forward; fall-out left forward with arm bending upward (or change to sideward position) (4 parts).

5. *a* and *b* as in 4 *a* and *b* but **lay-out** instead of fall-out.
6. Fall-out (**lay-out**) left forward with arm raising forward-upward; **arm circling** backward (repeat); closing-step left with arm lowering forward.
7. Fall-out left backward (Fig. 16, p. 106); (**lay-out**) with arm stretching upward; **arm circling** forward; **arm circling** backward; closing-step left with arm bending upward.
8. **Lay-out** left backward with arm stretching left upward and right downward; quick change of arm position through forward position (repeat); closing-step left with arm bending upward.
9. **Lay-out** left forward with arm bending upward; **lay-out** left backward (stretching and bending of standing leg) with arm stretching upward (4 parts).
10. (*a*) **Lay-out** left forward with arm raising forward-upward; **knee stretching** to toe-stand right; with change to sideward position of arms (4 parts).

    (*b*) **Lay-out** left sideward with arm raising sideward upward; **knee stretching** to toe-stand right with change to sideward position of arms (4 parts).

    (*c*) **Lay-out** left backward with arm raising

backward; **knee stretching** to toe-stand right with change to upward position of arms through downward position (4 parts).

11. (*a*) Fall out left forward with arm bending; closing-step left to **deep knee bending** with arm stretching forward; fall-out left forward with change to sideward position of arms; closing-step left with arm lowering.

    (*b*) **Deep knee bending** with arm bending upward; fall-out left forward (sideward) with arm stretching upward; **change** to sideward position of arms in ulnar position; **arm bending** to neck-rest position; **arm stretching** upward; closing-step left with arm lowering sideward.

12. (*a*) **Deep knee bending** with arm raising forward; resting of the hands in front of feet and leg stretching backward to front-leaning-rest (Fig. 72); jump to deep knee bending with arm raising forward; knee stretching with arm lowering.

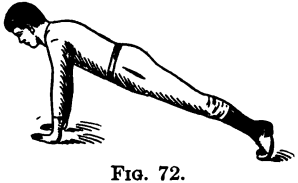


Fig. 72.

    (*b*) In front-leaning-rest: **leg raising** left backward.

13. (*a*) Knee bending with arm raising backward; jump in place (forward) to knee bending with arm circling downward to forward position; knee stretching with arm lowering.

(*b*) Step jump left forward to knee bending with arm circling forward to forward position; knee stretching with arm circling downward.

Combination of Leg and Trunk Exercises with Arm Movements

In Course III the trunk exercises are generally executed in change or in combination with leg and arm movements ; but it is assumed that they were practiced, executed properly and separately in their respective position. To increase difficulty and effect they are combined with arm movements. (See numbers 15 and 17.)

14. (*a*) Side-step left to toe-stand right with arm raising sideward in ulnar position ; **trunk bending** left sideward with arm bending to neck-rest position (repeat).

    (*b*) Back-step left to toe-stand right with arm raising sideward ; **trunk bending** backward with arm bending forward (repeat).

15. (*a*) Fall-out left forward ; **trunk bending** (**trunk stooping**) forward (repeat).

    (*b*) Fall-out left sideward ; **trunk turning** left (repeat).

    (*c*) Fall-out left sideward ; **trunk bending** left sideward (repeat).

    (*d*) **Lay-out** left backward ; **trunk turning** left (repeat).

16. (*a*) **Lay-out** left forward with arm raising sideward ; **trunk bending** backward with arm bending forward (4 parts).
(*b*) **Lay-out** left backward with arm raising forward-upward ; **trunk stooping** forward with arm bending upward (4 parts).
(*c*) **Lay-out** left sideward with arm bending to rest position ; **trunk bending** right sideward with arm stretching sideward (4 parts).

Fig. 73.

17. (*a*) Fall-out left forward with arm bending upward ; **trunk bending** forward with arm stretching forward, Fig. 73, (4 parts).
(*b*) As in *a* but **trunk stooping** forward with arm stretching upward, Fig. 74, (4 parts).
(*c*) Fall-out left backward with arm bending upward ; **trunk turning** right with arm stretching upward (4 parts).

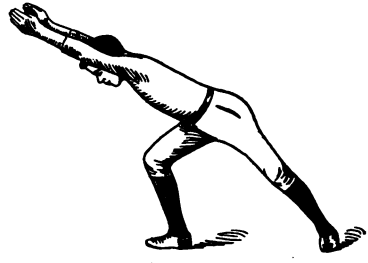


Fig. 74.

18. (*a*) **Trunk bending** backward with arm raising forward-upward ; **trunk bending** forward with

change to upward position of arms (4 parts), at the fourth movement arm bending to hip-rest, then **leg raising** left forward ; **change** to backward position left (4 parts).

(*b*) **Trunk stooping** forward with arm raising forward-upward; **arm bending** to neck-rest position ; **arm stretching** sideward ; **trunk bending** forward with change to forward position of arms ; **trunk stretching** with change to upward position of arms ; arm lowering sideward. This exercise may be executed with twice arm bending to neck-rest position.

19. In stride position : **Trunk turning** left ; **trunk bending** forward (backward, sideward, **trunk stooping** forward) (repeat).

Fourteenth Year

Arm Movements

At this age arm movements alone are rarely executed. The exercises of former years may be repeated or further developed.

Combination of Leg and Arm Exercises

1. (*a*) **Lay-out** left forward with arm bending upward ; fall-out left forward (stepping ahead !) with arm stretching upward (4 parts).

(*b*) **Lay-out** left sideward with arm bending

upward ; fall out left sideward (as in *a*) with arm stretching sideward (4 parts).

2. (*a*) **Leg raising** left forward with arm raising forward ; **change** to backward position left with change to upward position of arms ; fall-out left forward (**lay-out** left forward) with change to sideward position of arms ; closing-step left with arm lowering.

   (*b*) **Leg raising** left backward with arm raising forward-upward ; **change** to forward position left with arm bending upward ; fall-out left backward (**lay-out** left backward) with arm stretching sideward ; closing-step left with arm lowering.

3. (*a*) Knee raising left with arm bending upward ; **leg stretching** left forward with arm stretching forward ; fall-out left backward with change to upward position of arms ; closing-step with quarter turn left and arm lowering sideward ; repeat 3 times.

   (*b*) Knee raising left with arm bending upward ; **leg stretching** left backward with arm stretching upward ; fall-out left forward with arm bending to neck-rest position ; closing-step left with quarter turn right and arm lowering : repeat 3 times.

4. (*a*) **Lay-out** left forward (backward, sideward) with arm raising sideward (backward, arm

bending to neck-rest position) ; **knee stretching** to toe-stand (both feet) with change to upward position of arms (through downward position with arm stretching upward) (4 parts).
(*b*) **Lay-out** left forward with arm bending upward ; **knee stretching** to toe-stand (both feet) with arm stretching sideward ; **knee bending** (both legs) with change to upward position of arms ; closing-step left with arm lowering sideward.

5. (*a*) Jump to stride position with arm raising sideward ; **knee bending** left with quarter turn left (on heels) and arm bending forward (repeat).
(*b*) Front-step left (long) with arm raising forward upward ; **knee bending** right with quarter turn right (on heels) and arm bending to neck-rest position (repeat).
6. (*a*) Fall-out left forward with arm bending to neck-rest position ; knee stretching with **leg raising** right backward and arm stretching upward ; leg lowering right to **deep knee bending** with change to sideward position of arms ; knee stretching with arm lowering.
(*b*) As in *a*, but fall-out left sideward ; knee stretching with **leg raising** right sideward.
7. (*a*) Fall-out left sideward with arm raising sideward upward ; **change of knee bending**

with quarter turn right and arm bending upward ; closing-step left to **deep knee bending** with arm stretching sideward ; knee stretching with arm lowering ; repeat 3 times.

(*b*) Fall-out left forward with arm raising forward-upward ; **change of knee bending** with quarter turn right and arm bending to neck-rest position ; closing-step left to **deep knee bending** with arm stretching upward ; knee stretching with arm lowering sideward; repeat 3 times.

8. (*a*) Two successive jumps in place with arm circling forward.

   (*b*) Two running steps and jump forward with quarter turn.

9. (*a*) In stoop fall position : **Leg raising** left backward (repeat).

   (*b*) In stoop fall position : **Arm bending** once to several times.

Change and Combinations of Trunk Exercises with Leg and Arm Movements

If no arm movement is prescribed, the arms repose in position in which they were placed by the preceding movement.

10. (*a*) **Lay-out** left forward with arm raising forward (or arm bending to neck-rest position) ; knee stretching with **trunk bending** backward

and change to sideward position of arms (4 parts).

(*b*) **Lay-out** left sideward with arm raising sideward in ulnar position ; knee stretching with **trunk bending** left sideward and arm bending to neck-rest position (4 parts).

11. (*a*) Fall-out left forward with arm raising forward-upward ; knee stretching with **trunk bending** forward and change to forward position of arms (4 parts).

(*b*) As in *a*, but **trunk stooping** forward.

(*c*) Fall-out left sideward with arm raising sideward-upward ; knee stretching with **trunk bending** right sideward and change to sideward position of arms (4 parts).

(*d*) Fall-out left forward with arm raising sideward ; knee stretching with **trunk turning** left and arm bending to neck-rest position (4 parts).

(*e*) Fall-out left forward with arm raising forward-upward ; **arm circling** forward and **trunk bending** forward with change to forward position of arms ; **trunk stretching** with change to upward position of arms and **arm circling** backward ; closing-step left with arm lowering forward.

12. (*a*) Flinging left forward to **lay-out** left backward with arm raising forward and change to

upward position of arms ; **trunk stooping** forward with arm bending upward (repeat).

(*b*) Flinging left backward to **lay-out** left forward with arm raising forward-upward and change to sideward position of arms in ulnar position ; **trunk turning** left with arm bending to neck-rest position (repeat).

13. **Trunk stooping** with arm raising forward-upward ; **arm circling** backward and **arm bending** to neck-rest position; **trunk stretching** and fall-out left forward with arm stretching upward; closing-step left with quarter turn right and arm lowering sideward ; repeat 3 times.
14. (*a*) Side-step left with arm raising sideward-upward ; **trunk turning** left with **trunk bending** right sideward and arm bending (to neck-rest position) (4 parts).

(*b*) As in *a*, but **trunk bending** left with **trunk stooping** forward and arm bending.

Fifteenth Year

First, the main exercises of the ages of 13 and 14 are to be repeated ; the following exercises are then supplementary to that material.

Combinations of Leg and Arm Movements

1. **Leg raising** left backward with arm raising forward-upward ; fall-out left forward with

arm bending ; knee stretching left with **leg raising** right backward and arm stretching sideward ; flinging right forward with change to forward and downward position of arms.

2. Fall-out left forward with arm bending ; knee stretching left with **leg raising** right forward and arm stretching upward ; **change** to backward position right with arm bending to neck-rest position ; flinging right forward with arm stretching sideward and arm lowering.
3. (*a*) Fall-out left forward with arm raising forward-upward ; fall-out right forward with arm circling forward ; fall-out left forward with arm circling forward ; closing-step right with quarter turn right and arm lowering sideward ; repeat 3 times.
   (*b*) As in *a*, but with arm circling backward.
4. Fall-out left forward with arm bending to neck-rest position ; **change of knee bending** with quarter turn right and arm stretching sideward ; knee stretching right with **leg raising** left sideward and change to upward position of arms ; leg lowering left to deep knee bending and stretching with change to sideward and downward position of arms ; repeat 3 times.
5. Fall-out left sideward with arm bending upward ; **change of knee bending** with quarter turn right and arm stretching upward ; **change**

of knee bending with arm circling backward ; closing-step with arm lowering sideward ; repeat 3 times.

6. (*a*) **Lay-out** left forward with arm bending upward and fall-out left forward with arm stretching upward ; **change of knee bending** with quarter turn right and arm bending upward ; **knee stretching** to toe-stand right with arm

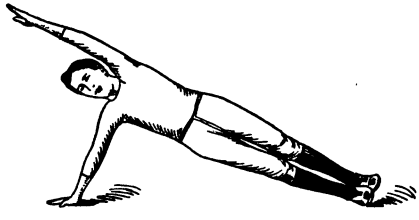


FIG. 75.

stretching upward ; closing-step left with arm lowering sideward.

(*b*) **Lay-out** left sideward with arm bending upward and fall-out left sideward with arm stretching upward ; **change of knee bending** with arm bending to neck-rest position; **knee stretching** to toe-stand (both feet) with arm stretching upward ; closing-step left with arm lowering sideward.

7. (*a*) After a jump forward, broad jump with feet together (high jump).

(*b*) Three running steps and high jump.

8. (*a*) In front-leaning-rest : **Arm bending** several times.

(*b*) From front-leaning-rest : Quarter **turn** left to side-leaning-rest with raising of left arm sideward; **change** to upward position left (Fig. 75); quarter **turn** right and resting left to front-leaning-rest.

Combinations of Leg, Trunk, and Arm Exercises

9. (*a*) Fall-out left forward with arm raising forward-upward ; knee stretching left with **trunk bending** backward and arm bending upward (4 parts).

(*b*) Fall-out left backward with arm raising sideward ; **change of knee bending** with trunk bending forward and change to upward and forward position of arms (4 parts).

(*c*) Fall-out left sideward with arm raising sideward-upward ; **change of knee bending** with trunk bending right sideward and arm bending to neck-rest position (4 parts).

10. **Trunk stooping** with arm bending upward; **arm stretching** upward ; **arm circling** backward and fall-out left forward ; closing-step left with quarter turn right and arm lowering sideward ; repeat 3 times. Also with once to twice **arm bending** and **stretching** before arm circling.

11. (*a*) Fall-out left sideward with arm raising sideward-upward ; knee stretching left with **trunk turning** left and **trunk bending** right sideward and change to sideward position of arms, Fig. 76 (4 parts). In the second position also **arm bending** forward.

Fig. 76.

(*b*) Fall-out left sideward with arm bending to neck-rest position; knee stretching left with **trunk turning** right and **trunk stooping** forward and arm stretching upward, Fig. 77, (4 parts). In the second position also several times **arm bending** to neck-rest position.

12. In stride position: Trunk circling left (each 6 movements). **Trunk stooping**; **trunk bending** left sideward ; **trunk bending** backward ; **trunk bending** right sideward ; **trunk stooping** ; **trunk stretching**.

This exercise also with arm bending upward (to neck-rest position and upward) position of arms.

Fig. 77.

C. WAND EXERCISES

Wand exercises are free-standing exercises in which the arms have to bear the weight of an iron wand. They *should only be used in Course III.*

The weight of the iron wand is to be 5–6 pounds, the length 3 feet 4 inches.

The general remarks of practice and the command of free-standing exercises apply also to those of the wand ; and the execution of movements in regard to the time measure follows the same rules. The exercises presented here are visible in the pictures and do not need additional description.

In exercises of two parts in the following examples, the command for the retrogressive movement (lowering, stretching, etc.) is omitted.

Change of wand positions may be executed either direct, in shortest space, or by swinging (through downward position) ; the former we call *change of wand position,* the latter *wand swinging.* Examples :

Wand raising left oblique ; change to oblique position right (wand is raised over head) ; on the other hand : Wand raising left oblique ; wand swinging right oblique (wand is swung through downward position).

To fall in, and in marching exercises, the wand is set in the palm of the right hand. The right arm is stretched, the dorsal part of hand turned forward (Fig. 78).

From the front downward position at the command *Right up — wand!* the wand is set in the right hand while the left hand moves to the right shoulder and returns to the downward position immediately after the wand is set up.

Fig. 78.

The wand is in downward position when horizontal in front of thighs, grasped with both hands at a distance of the body's width.

To return the wand to the downward position, which is the starting position for wand exercises, the command *Grasp — wand!* is given, whereat the left hand grasps the wand over the right shoulder from the rear and lowers it to horizontal position ; both hands grasp it with dorsal grasp.

In running in double time at the command *Left (right) grasp — wand!* the left (right) hand grasps the wand in vertical position. By continued running the wand is carried alternately.

The position of arms in double time is the same as in running without wand.

Thirteenth Year

Arm Movements

1. *Wand exercises from the downward position* (in normal or stride position):

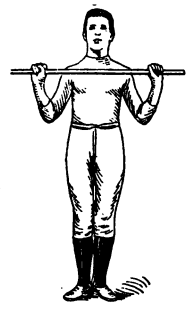


Fig. 79.

(*a*) Wand raising forward.

(*b*) **Wand raising** forward-upward.

(*c*) Wand raising in front of shoulders (Fig. 79).

(*d*) Wand raising left sideward (Fig. 80).

(*e*) Wand raising left upward (Fig. 81).

(*f*) Wand raising left oblique (Fig. 82).

2. *Combination of two wand positions* (in normal or stride position):

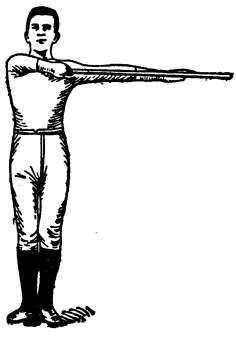


Fig. 80.

(*a*) Change of forward and **upward** position and vice versa (several times or 4 parts).

(*b*) Change of forward or **upward** and in front of shoulders position (several times or 4 parts).

(*c*) From sideward left position: Wand swinging right sideward (several times or 4 parts).

(*d*) From upward left position: Wand swinging right upward (several times or 4 parts).

Combinations of Arm and Leg Exercises

3. (*a*) **Toe stand** with wand raising forward upward.

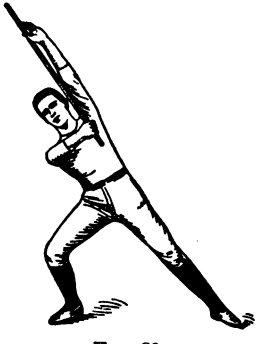


Fig. 81.

(*b*) **Knee bending** with wand raising forward.

(*c*) As in *b*, but **deep knee bending**.

4. (*a*) Knee raising left with wand raising in front of shoulders.

(*b*) **Leg raising** left forward with wand raising forward.

(*c*) **Leg raising** left backward with wand raising forward-upward.

(*d*) **Leg raising** left sideward with wand raising right sideward.

5. (*a*) **Toe stand** with wand raising forward-upward; **knee bending** with change to forward position of wand (4 parts).

(*b*) As in *a*, but **deep knee bending**.

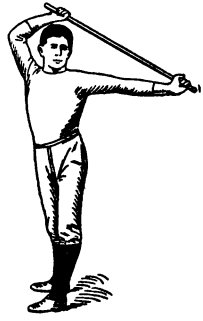


Fig. 82.

6. (*a*) Front-step left to toe-stand right with wand raising forward ; **knee bending** right with change to upward position of wand (4 parts).
(*b*) Side-step left to toe-stand right with wand raising in front of shoulders ; **knee bending** right with change to upward position of wand (4 parts).
(*c*) Back-step left to toe-stand right with wand raising in front of shoulders ; **knee bending** right with change to upward position of wand (4 parts).
7. (*a*) **Lay-out** left backward with wand raising forward-upward ; closing-step left with wand lowering backward and **lay-out** right backward with raising forward-upward (4 parts).
(*b*) As in *a*, but fall-out forward instead of lay-out backward.
(*c*) **Lay-out** left sideward with wand raising left upward (Fig. 81) ; closing-step left with wand lowering and **lay-out** right sideward with wand raising right upward (4 parts).
(*d*) As in *c*, but fall-out left sideward with wand raising right upward instead of lay-out.
8. (*a*) **Leg raising** left forward with wand raising forward ; **change** to backward position with change to upward position of wand (4 parts).
(*b*) As in *a*, but beginning with leg raising left backward and wand raising forward-upward.

9. (*a*) Flinging left forward with wand raising forward.
(*b*) Flinging left backward with wand raising forward-upward.
(*c*) Flinging left sideward with wand raising right sideward.

Combinations of Arm, Leg, and Trunk Exercises

10. (*a*) Side-step left (or jump to stride position) with wand raising forward-upward ; **trunk stooping** (4 parts).
(*b*) As in *a*, with wand raising in front of shoulders ; **trunk bending** forward with change to forward position of wand (wand in front of feet) (4 parts).
(*c*) As in *a*, but with wand raising in front of shoulders ; **trunk bending** backward (4 parts).
(*d*) Side-step left with wand raising left upward ; **trunk bending** right sideward (4 parts).
(*e*) Side-step left with wand raising forward-upward ; **trunk turning** left with change to sideward left position of wand (4 parts).
11. (*a*) **Lay-out** left forward with wand raising in front of shoulders ; closing-step left and **trunk stooping** (**bending**) forward, with change to upward (forward) position of wand (3 or 4 parts).
(*b*) **Lay-out** left sideward with wand raising

left upward ; closing-step left and **trunk bending** left sideward with wand swinging right upward (3 or 4 parts).

(*c*) **Lay-out** left backward with wand raising in front of shoulders ; closing-step left with change to upward position of wand and **trunk bending** backward (3 or 4 parts).

(*d*) **Lay-out** left sideward with arm raising left upward ; closing-step left and **trunk turning** right with wand swinging right oblique (3 or 4 parts).

12. (*a*) Fall-out left forward (**lay-out** left backward) with wand raising forward-upward ; **trunk stooping** (**bending**) forward (4 parts).

(*b*) Fall-out left backward (**lay-out** left forward) with wand raising in front of shoulders ; **trunk bending** backward with change to upward position of wand (4 parts).

(*c*) Fall-out left sideward (**lay-out** right sideward) with wand raising in front of shoulders ; **trunk bending** left sideward with change to upward position of wand (4 parts).

(*d*) Fall-out left forward (sideward, backward) with wand raising in front of shoulders ; **trunk turning** left with change to upward position of wand (4 parts).

Fourteenth Year

Arm Exercises

1. *Wand positions* (in normal or stride positions).
   (*a*) **Wand raising** in rear of neck (neck position) (Fig. 83).
   (*b*) Wand raising in rear of left shoulder (Fig. 84).
2. *Combination of two wand positions* (in normal or stride position).
   (*a*) **Change** of neck and upward position (repeat or 4 parts).
   (*b*) Wand raising left oblique ; **change** to oblique position right (*i.e.*, direct, over head) (4 parts).
   (*c*) Wand raising left oblique ; wand swinging right oblique (4 parts).
   (*d*) Wand raising in rear of left shoulder ; wand swinging in rear of right shoulder (4 parts).
   (*e*) Wand raising left upward ; wand swinging right oblique (4 parts).
   (*f*) Wand raising left oblique ; **change** to position in rear of right shoulder (4 parts).

Fig. 83.

Fig. 84.

Combinations of Arm and Leg Exercises

3. (*a*) **Lay-out** left sideward with wand raising in rear of neck ; **change of knee bending** with change to upward position of wand (4 parts).
   (*b*) Fall-out left sideward with wand raising right upward ; **change of knee bending** with wand swinging left upward (4 parts).
   (*c*) Fall-out left sideward with wand raising right upward ; **change of knee bending** with quarter turn right and change to upward position of wand ; closing-step left to **deep knee bending** with change to forward position of wand ; knee stretching with wand lowering ; repeat 3 times.
4. Fall-out left forward (backward) with wand raising in rear of left shoulder (Fig. 84, p. 204) ; closing-step left to **deep knee bending** with change to forward position of wand (3 or 4 parts).
5. (*a*) Knee raising left with wand raising in front of shoulders ; **leg stretching** left forward with change to forward position of wand ; fall-out left backward with change to upward position of wand ; closing-step left with wand lowering forward.
   (*b*) As in *a*, but lay-out backward instead of fall-out.

6. (*a*) **Leg raising** left forward with wand raising forward ; **lay-out** left backward with change to upward position of wand (4 parts).
   (*b*) As in *a*, but fall-out left backward (instead of lay-out) with change to neck position of wand.
   (*c*) **Leg raising** left backward with wand raising in front of shoulders (4 parts) ; **Fall-out** left forward with change to upward position of wand.
   (*d*) As in *c*, but fall-out left forward.
7. Grasp wand right on upper end and place it beside the right foot (wand as support); high leg flinging left forward, sideward, backward.
8. Fall-out left forward with wand raising forward-upward ; fall-out right forward with change to neck position of wand ; fall-out left forward with change to upward position of wand ; closing-step right with quarter turn right and wand lowering forward ; repeat 3 times.

Combinations of Arm, Leg, and Trunk Exercises

9. In normal or stride position:
   (*a*) **Trunk turning** left with wand raising left oblique (Fig. 82, p. 200); **trunk turning** right with wand swinging right oblique (4 parts).
   (*b*) As in *a*, but with wand raising in rear of

right shoulder and wand swinging in rear of left shoulder.

10. **Trunk stooping** with wand raising forward-upward ; **trunk bending** forward with change to forward position of wand ; **trunk stretching** with change to upward position of wand and fall-out left forward ; closing-step left.
11. **Trunk bending** left sideward with wand raising right upward ; **trunk bending** right sideward with wand swinging left upward ; trunk stretching and fall-out left sideward with wand swinging right upward ; closing-step left with wand lowering.
12. **Trunk turning** left with wand raising in front of shoulders ; trunk turning forward and **trunk bending** backward with change to upward position of wand ; fall-out left backward with change to neck position of wand ; closing-step left with wand lowering forward.
13. (*a*) Fall-out left forward with wand raising forward-upward ; **trunk stooping** forward ; **trunk bending** forward with change to forward position of wand ; closing-step left with trunk stretching and wand lowering.

    (*b*) Fall-out left sideward with wand raising forward-upward ; **trunk bending** left sideward with change to upward position right ; **trunk bending** right sideward with wand

swinging left upward ; closing-step left with trunk stretching and wand lowering left sideward.

FIFTEENTH YEAR

Combinations of Arm and Leg Exercises

1. (*a*) Grasp wand right on upper end and place it beside the right foot (wand as support) : Leg swinging forward and backward (in 3 or 4 parts or continued).
   (*b*) As in *a*, but leg swinging backward and forward.
2. (*a*) **Deep knee bending** with wand raising forward ; knee stretching with **leg raising** left backward and change to upward position of wand ; fall-out left forward with change to neck position of wand ; closing-step left with arm lowering forward.
   (*b*) As in *a*, but **leg raising** left forward ; **lay-out** left backward.
3. (*a*) **Lay-out** left forward (backward) with wand raising in front of shoulders ; fall-out left forward with change to upward position of wand ; closing-step left to **deep knee bending** with change to upward position of wand ; knee stretching with wand lowering.
   (*b*) **Lay-out** left sideward with wand raising in rear of neck ; fall-out left sideward with

change to upward position of wand ; closing-step left to deep **knee bending** with change to forward position of wand ; knee stretching with wand lowering.

4. (*a*) **Leg raising** left backward with wand raising forward upward ; **lay-out** left forward with change to neck position of wand ; fall-out left forward with change to upward position of wand ; closing-step right with quarter turn right to deep knee bending and stretching and change to forward and downward position of wand ; repeat 3 times.

   (*b*) **Leg raising** left forward with wand raising forward ; **lay-out** left backward with change to upward position of wand ; quarter turn left with **change of knee bending** and change to neck position of wand ; closing-step left to deep knee bending and stretching and change to forward and downward position of wand ; repeat 3 times.

5. (*a*) Fall-out left forward with wand raising in rear of left shoulder ; **change of knee bending** with wand swinging in rear of right shoulder ; knee stretching with **leg raising** left backward and change to upward position of wand ; leg lowering left with wand lowering forward.

   (*b*) Fall-out left sideward with wand raising in front of shoulders ; **change of knee bending**

with change to upward and neck position of wand ; knee stretching with **leg raising** left sideward and change to upward position of wand ; leg lowering left with wand lowering forward.

Combinations of Arm, Leg, and Trunk Exercises

6. (*a*) **Leg raising** left backward with wand raising forward-upward ; leg lowering left and **trunk bending** backward with change to neck position of wand ; **trunk stooping** forward with change to upward position of wand ; **trunk stretching** with wand lowering forward.

   (*b*) **Leg raising** left sideward with wand raising forward-upward ; leg lowering left and **trunk bending** left sideward with change to upward position right of wand ; **trunk bending** right sideward with wand swinging left upward ; trunk stretching with wand lowering left sideward.

7. Fall-out left backward with wand raising forward upward ; **trunk turning** left with change to neck position of wand ; trunk turning forward and **trunk bending** backward with change to upward position of wand ; trunk stretching and closing-step left with wand lowering forward.

8. (*a*) Deep knee bending and stretching and fall-out left forward with wand raising forward and change to upward position of wand ; **trunk bending** (**stooping**) forward ; **trunk bending** backward ; trunk stretching and closing-step right with quarter turn right and wand lowering forward ; repeat 3 times.
   (*b*) As in *a*, but **lay-out** backward instead of fall-out forward, ending with closing-step left with quarter turn left.
9. (*a*) **Lay-out** left forward with wand raising in front of shoulders and fall-out left forward with change to upward position of wand ; **trunk bending** forward with change to forward position of wand (wand in front of left foot): **trunk stretching** to stoop position with change to upward position of wand ; **trunk stretching** and closing-step right with quarter turn right and wand lowering forward ; repeat 3 times.
   (*b*) As in *a*, but **lay-out** left forward and **lay-out** left backward, finishing with closing-step left with quarter turn left.

D. EXERCISES ON APPARATUS

Climbing Poles

THIRTEENTH YEAR

Inclined Poles

1. Bent-hang on two poles ; lowering slowly to hang ; jumping down (repeat).
2. Bent-hang on two poles ; lowering slowly to hang with knee raising or lower leg raising ; jumping down.
3. Climbing with grasp on two poles and either climbing-clinch on one pole ; climbing downward.
4. Swinging in hang with grasp on two poles and after the second (third) rear-swing jumping down.
5. Swinging in bent-hang with grasp on two poles, and after the second (third) rear-swing jumping down.
6. In hang on two poles : Traveling up and down with moderate side swinging of legs.

Vertical Poles

7. Climbing with grasp on two poles and either climbing-clinch on one pole ; climbing down.
8. Climbing on one of the end poles with change

of climbing-clinch with each pull and any grasp-over ; traveling diagonally downward (with each move on another pole).

FOURTEENTH YEAR

Inclined Poles

1. Swinging in hang with grasp on two poles and after the third (fourth) rear-swing downward jump.
2. Swinging in bent-hang with grasp on two poles and after the third (fourth) rear-swing downward jump.
3. Climbing with grasp on two poles and either climbing-clinch on one pole ; traveling sideward, then climbing down with grasp on one pole.
4. Traveling diagonally upward (climbing upward with changing poles) ; climbing downward with grasp on two poles.
5. Climbing with grasp on two poles and change of climbing-clinch on one pole with each pull ; traveling downward without use of legs.
6. In hang on two poles : Hand traveling up and down.
7. Hang on two poles ; twice arm bending.

Vertical Poles

8. Traveling diagonally upward ; climbing down with grasp on one pole.
9. Climbing with grasp on two poles and either climbing-clinch on one pole; traveling sideways, and then climbing downward with grasp on two poles.
10. Climbing with grasp on two poles and change of poles with each pull ; climbing down.

FIFTEENTH YEAR

Inclined Poles

1. Change of hang and bent-hang with grasp on two poles (several times).
2. In hang and bent-hang position with grasp on two poles traveling up and down without use of legs.

Vertical Poles

3. Climbing with grasp on two poles and change of climbing-clinch with each pull ; traveling downward in bent-hang without use of legs.
4. Climbing with grasp on two poles and change of climbing-clinch and poles with each pull ; traveling downward in hang position without use of legs.

5. Traveling up and downward in hang and bent-hang without use of legs with grasp on two poles.

Horizontal Bar

THIRTEENTH YEAR

Bar: Chest to Head High

Starting position: Side-stand forward.

1. Circle-up-swing with reversed grip and immediate change to ordinary grip; inter-jump and under swing.
2. In bent-knee-instep-balance-hang with reversed grip: Leg stretching upward and again bending to balance-hang; jumping down and change of grip; jump backward to arch-hang position.
3. Front-inner-knee-swing left; lowering backward to knee hang and immediate knee-swing left; lowering backward to knee hang and squatting-vault left to jump downward.
4. Front-circle-up-swing to rest with ordinary grip; trunk lowering forward with aid of comrade; arm exercises in lowering forward position; grasping and lowering to bent-knee-instep-balance-hang.
5. Swinging in bent-hang with ordinary grip

and after the second (third, fourth) rear- or fore-swing downward jump.

6. From bent-knee-instep-balance-hang with ordinary grip ; inter-jump and front-circle-upswing to rest ; front-circle-down-swing (head first) to swinging in bent-hang ; jumping down forward or backward.

Bar in Jump Reach

Starting position : Side-stand forward, in exercises 7, 9, *and* 11 *under, in the others in rear of bar.*

7. From bent-hang with combined grip : Lowering to hang position with knee raising ; lowering ; downward jump (several times).
8. Swinging in hang with ordinary grip and after the third (fourth) rear-swing downward jump.
9. From bent-knee-instep-balance-hang lowering to bent-hang ; lowering to hang.
10. Swinging in hang with combined grip and at the second fore-swing jumping down forward with quarter turn to the side of the hand being in ordinary grip.
11. Swinging in bent-hang with combined grip ; at the second fore-swing arm stretching to swinging in hang and after the second rear-swing downward jump.

FOURTEENTH YEAR

Bar : Chest to Head High

Starting position : Side-stand forward.

1. Front-circle-up-swing to rest with ordinary grip ; lowering forward to bent-knee-instep-balance-hang ; leg stretching upward and lowering to bent-hang ; inter-jump and under swing.
2. Front-outer-knee-swing left and flinging left outward to rest ; inter-jump and front-circle-up-swing ; under swing (to normal position).
3. From bent-knee-instep-balance-hang : Front-circle-up-pull to rest ; inter-swing and back-circle-down-swing (feet first) and jumping backward downward.
4. In bent-hang with reversed grip : Change to ordinary grip ; jumping down and jump backward to arch-hang.
5. Swinging in bent-hang with ordinary grip ; after the second (third) fore-swing jumping down with quarter turn.
6. From bent-knee-instep-balance-hang with reversed grip : Front-circle-up-pull ; lowering forward to swinging in bent-hang and at the second fore-swing jumping forward downward.
7. Swinging in bent-hang with reversed grip and at the second fore-swing to bent-knee-

instep-balance-hang ; leg lowering and rear swing in bent-hang to downward jump.

Bar in Jump Reach

All exercises, except the first one, are executed with ordinary grip, numbers 8 *and* 11 *from side-stand, the others from side-stand in rear of bar.*

8. From bent-hang with reversed grip: Lowering to hang ; arm bending ; arm stretching.
9. Swinging in hang and after the third (fourth) rear-swing jumping down.
10. Swinging in bent-hang ; at the second fore-swing arm stretching to swinging in hang and after the second rear-swing jumping down.
11. Jump to bent-hang and immediate arm stretching to swinging in hang ; at the second fore-swing jumping down with quarter turn.
12. Swinging in hang ; at the second fore-swing half turn forward left (the right hand here takes ordinary grip while left hand is in reversed grip) and fore- and rear-swing to downward jump.
13. Swinging in hang ; at the second fore-swing half turn forward left ; inter-jump to half turn forward right and fore- and rear-swing to downward jump.

FIFTEENTH YEAR

Bar: Chest to Head High

Starting position: Side-stand forward.

1. Front-circle-up-swing with reversed grip; lowering forward to reverse hang; circle-up-pull and change of grip to ordinary grip; back-circle-down-swing and under swing.
2. Swinging in bent-hang with reversed grip and at the second fore-swing front-circle-up-swing; change of grip to ordinary grip; under swing.
3. Swinging in bent-hang with ordinary grip; at the second fore-swing front-outer-knee-swing left; lowering backward with flinging left outward and swinging in bent-hang; down jump backward.
4. Swinging in bent-hang and ordinary grip and at the second fore-swing front-circle-up-swing; lowering forward to bent-knee-instep-balance-hang; lowering to bent-hang.
5. Front-circle-up-pull with ordinary grip; lowering forward to rear- and fore-swing in bent-hang and front-outer-knee-swing left and flinging left leg outward to rest; back-circle-down-swing and under swing.

Bar in Jump Reach

Starting position: Side-stand under bar. All exercises with ordinary grip.

6. In bent-hang : Arm stretching and bending.
7. Swinging in hang ; at the second fore-swing half turn forward left and immediately half turn forward right to fore- and rear-swing and downward jump, also 3 times half turning in succession (left, right, left) and downward jump with quarter turn at fore-swing.
8. From bent-knee-instep-balance-hang : Front-outer-knee-swing left ; by flinging left outward to rest ; back-circle-down-swing to swinging in bent-hang and at the second fore-swing downward jump.
9. Front-outer-knee-swing left ; leg flinging left outward to rest ; under swing.
10. Front-circle-up-swing ; under-swing to rear-swing and downward jump.

Swiss Boom

THIRTEENTH YEAR

Boom: Hip to Chest High

Starting position as in tenth year.

1. Flinging left leg outward to straddle-mount left beside pommels ; leg swinging forward

and backward to front-leaning-rest ; jump down left sideward.

2. As in 1 but from front-leaning-rest lowering to straddle-mount with fore- and back-swinging of legs to rear-vault left.
3. Flinging left and right leg outward to side-mount (also to rest backward) between pommels (Fig. 85) ; jump down forward.
4. Flinging right leg outward between the pommels to rest (Fig. 86) (side straddle, also to balance-rest) and flinging left leg outward with quarter (half) turn right to jump down.

Fig. 85.

Fig. 86.

5. Flinging left leg outward between the pommels to balance rest ; flinging left outward to stand ; also right ; squatting-vault.
6. Flank-vault left, first with momentary rest on the boom with left foot.

FOURTEENTH YEAR

Boom: Hip to Chest High

Starting position as in tenth year.

1. Flinging left leg outward between the pommels to balance rest; several times side swinging of both legs and finally flinging left outward to stand.

FIG. 87.

2. Flinging left leg outward between the pommels to side swinging of both legs and flinging left outward to stand; also right; flinging left and right outward to rest backward and jumping down forward.
3. Flinging left leg outward to straddle-mount left beside the pommels; back-shears; dismounting left sideward.
4. Flinging left leg outward between pommels to rest and three-quarter turn to left to straddle-mount left beside pommels; rear-vault left.

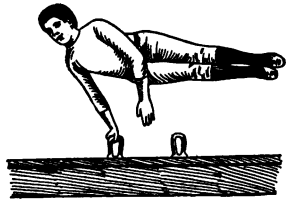


FIG. 88.

5. Balance-rest with side swinging of closed and stretched legs over height of boom.

6. Flank-vault left.
7. Rear-vault left, first with momentary rest of left foot on boom.
8. Squatting-vault (Fig. 87), flank-vault (Fig. 88), and rear-vault (Fig. 89), also with short running start (to be practiced very frequently !).

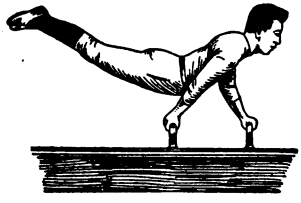


Fig. 89.

FIFTEENTH YEAR

Boom : Hip to Chest High

Starting position as in tenth year.

1. Balance-rest with flinging left leg inward and jump down.
2. Flinging left leg inward between pommels to balance-rest ; side swinging of both legs and flinging left outward to stand.
3. Flinging left leg outward between pommels to balance-rest with side swinging of both legs and flinging left inward to stand.
4. Circle left outward to stand.
5. Circle left inward to stand.
6. (*a*) Balance-rest with high straddling.
   (*b*) Straddle-stand on boom with firm grasp of hands ; repeated with inter-jump.

(*c*) Momentary straddle-stand and jump down forward.

(*d*) Straddle-vault (Fig. 90) (comrade stands by as aid).

7. After short running start : Squatting-vault (Fig. 87), flank-vault (Fig. 88), rear-vault (Fig. 89), straddle-vault (Fig. 90), and free-jump (without touching, *i.e.*, clearing the apparatus). (All these exercises to be repeated frequently !)

Fig. 90.

Exercises of Posture. Boom or Horizontal Bar

(*Height : Knee to Hip*)

THIRTEENTH YEAR

(Body leaning against the boom.)

1. In side-stand forward with bend (neck-rest, or stretch) position of arms : Leg raising left backward with trunk lowering (also trunk bending) forward.
2. Side-stand backward with arm position as in 1 : Leg raising left forward, with trunk lowering backward.
3. Cross-stand with arm position as in 1 : Leg

raising right sideward with trunk lowering left sideward.

FOURTEENTH YEAR

1. In rest position (grasp firm!) with aid of a companion holding the feet : Trunk lowering forward (several times) ; same exercise with bend (neck-rest, or stretch) position of arms.
2. In side-mount, with the aid of a companion, first also with firm grasp, then with arm position as in 1 : Trunk lowering backward.
3. Rest position : Trunk lowering forward ; trunk bending forward ; change of lowering to bending (several times) (aid of a companion).

FIFTEENTH YEAR

1. In rest position : Trunk lowering forward (see fourteenth year) ; trunk turning left.
2. In side-mount : Trunk lowering backward ; trunk turning left (aid of a companion).
3. Side-stand forward (one step away from boom) with instep support (also with foot on the boom and aid of a companion) ; hands on hips ; (Bend, neck-rest, or stretch position of arms) : Trunk lowering backward.
4. Side-stand backward (one step away from boom, with putting one foot on boom) ; hands on hips ; (Bend, neck-rest, or stretch position of arms) : Trunk lowering (trunk bending) forward.

Parallel Bars

THIRTEENTH YEAR

Bars: Hip to Chest High

1. Swinging in rest and at the third (fourth) fore-swing front-vault left.
2. Straddle-mount in front of both hands ; grasping forward and leg raising backward to front-leaning-rest ; inter-jump to rear-vault left.
3. Swinging in rest, at the second rear-swing straddle-mount in rear of both hands ; trunk lowering forward in bend position of arms (Fig. 91) (with neck-rest instead of bend position of arms) with heel-support under bars ; trunk raising (repeat) ; grasping forward, fore-swing and front-vault left with quarter turn right.

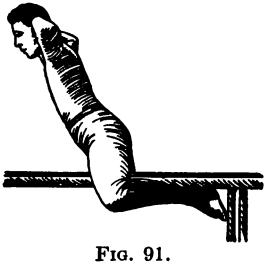


Fig. 91.

4. Swinging in rest and at the third (fourth) rear-swing rear-vault left.
5. Swinging in rest and at the second rear-swing straddle-mount in rear of left hand ; change to straddle-mount in rear of right hand ; rear-vault left.
6. Straddle-mount in front of hands ; grasping forward and leg raising backward to front-

leaning-rest ; leg raising left backward or raising of left arm sideward ; inter-jump and rear-vault left.

7. From side-stand outside : Jump to rest with leg flinging left and right outward to mount between the hands on near bar ; trunk lowering backward with arm bending (or raising) and pressing legs under and against the front bar (repeat) ; quarter turn right to cross-rest and swinging, at the second fore-swing outer-cross-mount in front of left and immediate change to outer-cross-mount in front of right hand and front-vault left.
8. Swinging in rest to straddle-mount in rear of both hands ; trunk lowering forward with arm bending and heel-support under bars ; trunk raising ; grasping and swinging to momentary straddle-mount in rear of left hand and rear-vault right.

FOURTEENTH YEAR

Bars : Hip to Chest High

1. From side-stand outside after short running start and combined grip of hands : Jump with leg flinging left outward to straddle-mount in rear of right hand ; inter-swing to front-leaning-rest ; arm bending (repeat) (Fig. 92) ; inter-jump to rear-vault left.

2. Beginning as in 1 : Flank-vault left to side-mount between hands on rear bar ; trunk lowering backward with arm bending upward and leaning of legs under and against the front bar ; head turning left ; head turning forward ; trunk raising ; inter-jump to rest on front bar with leg flinging left outward to resting of foot and jump down forward.

Fig. 92.

3. Swinging in rest with straddling at each rear-swing and at the third (fourth) fore-swing front-vault left with quarter turn right.
4. Swinging in rest with straddling at each fore-swing and at the third (fourth) rear-swing rear-vault left.
5. From side-stand outside after short running start with combined grip of hands : Leg flinging left outward to straddle-mount in rear of both hands ; trunk lowering forward with arm bending to rest position and heel-support under bars (Fig. 91, p. 226) (repeat) ; grasping forward and inter-jump to rear-vault left.
6. Swinging in rest and at the second rear-swing front-leaning-rest ; leg raising left backward with slight arm bending ; swinging in rest and front-vault left with quarter turn right.

7. From deep knee bending in cross-stand with grasping of bars from outward : Circle-up-swing to heel-support under bars and trunk stretching with forward position of arms to straddle-mount (Fig. 93) ; grasping backward,

FIG. 93.

swinging in rest, at the second rear-swing rear-vault left.

8. Swinging in rest and at the second rear-swing front-leaning-rest ; swinging in rest and at the second fore-swing back-leaning-rest ; swinging in rest and at the second fore-swing jump down with quarter turn left to side-stand inside ; flank-vault over the front bar with resting of left foot.

FIFTEENTH YEAR

Bars : Chest High

1. From side-stand outside after short running start with ordinary grip of hands : Flank-vault left to side-stand inside and jump to mount between hands on rear bar ; trunk lowering backward with arm bending to neck-rest and leaning of legs under and against front bar ; arm

stretching sideward (repeat) ; trunk raising ; jump down and flank-vault left over front bar.

2. Beginning as in left : Rear-vault to cross-stand inside bars and fore- and rear-swing to front-leaning-rest; leg raising left backward with arm bending (repeat); fore-swing to momentary straddle-mount in front of left bar and front-vault right with quarter turn left.
3. Swinging in rest with straddling at each fore- and rear-swing and at the third (fourth) fore-swing front-vault left with quarter turn right or at the third (fourth) rear-swing rear-vault left.

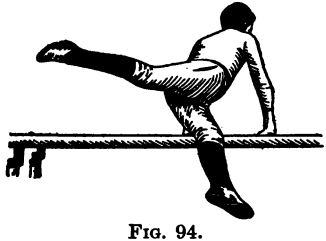


Fig. 94.

4. Swinging in rest ; at beginning of second rear-swing leg flinging left inward and quarter turn to side-leaning-rest on front bar (Fig. 94) ; arm bending (repeat) ; jump backward down.
5. Swinging in rest, at beginning of the third rear-swing leg flinging left inward and half turn left with circling right outward between bars to momentary outer-cross-mount in front of left hand ; inter-swing to front-vault left with quarter turn right.
6. From side-stand outside after short running

start with combined grip of hands: Rear-vault left to fore- and rear-swing and straddle-mount in rear of hands ; trunk lowering forward with arm raising forward-upward (sideward-upward) and heel-support under bars ; Trunk raising with arm lowering sideward (repeat) ; grasping forward and fore-swing and at beginning of rear-swing leg flinging left inward to down jump right sideward.

7. From side-stand outside : With short starting run and combined grip of hands ; rear-vault over both bars to cross-stand on the other side of bars (first to be practiced on bars hip high).
8. From deep knee bending in cross-stand with grasping bars from outside : Circling bars to heel-support under bars and trunk stretching with upward position of arms to straddle-mount in front of hands (grasping in rear of legs) ; inter-swing to outer-cross-mount in front of left hand and front-vault right with quarter turn left.

Stall Bars

THIRTEENTH YEAR

1. In cross-stand with grasp of inner hand on one bar :

(*a*) Leg raising left backward with knee bending right and trunk lowering forward.

(*b*) Leg raising left forward with knee bending right and trunk lowering backward.

2. In side-stand forward with left foot on bar : Trunk lowering backward with
   (*a*) Arm bending to neck-rest position.
   (*b*) Arm raising forward upward.
3. In span-bend position with grasp on one bar (see exercise of 8 *b*, p. 137).
   (*a*) Knee raising left (high!).
   (*b*) Knee raising left ; leg stretching left forward.
4. In forward hang position on upper bar : Slow lower leg raising.
5. In backward hang position on upper bar : Rapid leg raising and immediate slow lowering.

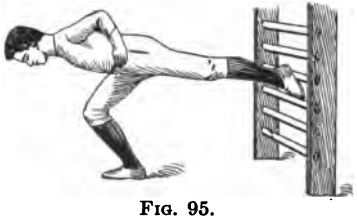


Fig. 95.

6. In side-stand backward with left foot on bar (not higher than knee high) and hands on hips : Fall-out right forward with trunk lowering forward (Fig. 95).
7. In cross-stand, 3–4 feet from apparatus, left side of body toward it : Arm raising sideward-upward and leg raising right sideward with trunk lowering left sideward and grasping with ulnar grasp (wide! lower arm stretched,

upper arm slightly bent) ; leg lowering right (repeat).

8. From side-stand backward : Front-leaning-rest with feet on apparatus—traveling backward on hands with short jumps, and traveling with feet to higher bars (short duration!).

FOURTEENTH YEAR

1. In cross-stand with grasp of right hand on one bar : Deep knee bending ; leg stretching left forward to forward position (leg stretching left sideward with placing foot on bench).
2. In side-stand forward with left foot on bench and arm bending forward : Trunk lowering backward ; arm stretching sideward (repeat).
3. In span-bend position with grasp on one bar (see exercise 8 *b*, p. 137).
   (*a*) Knee raising left with heel raising right.
   (*b*) As in *a*, then leg stretching left forward.

FIG. 96.

4. Span-bending in kneeling (Fig. 96) thighs vertical, knees either closed or apart.
5. In bent-hang forward on upper bar (elbows sideward) : Slow lower leg raising.

6. In backward hang position on upper bar: Knee raising; leg stretching left forward; also right forward; leg lowering.
7. In side-stand forward on one bar, grasp head high or higher : Alternate deeper grasping of hands with stretched legs and arms (also transition to sitting position) ; then also grasping higher of hands (trunk stooping and stretching).
8. In side-stand backward left foot on bar and bend position of arms: Fall-out right forward with trunk lowering forward; arm stretching sideward (upward) ; arm bending to neck-rest position (repeat).

Fig. 97.

9. Span-bend-standing (Fig. 97) from side-stand backward, body leaning close to bars, grasp as high as possible, then grasping 2 bars deeper, whereby the knees are slightly bent but heels do not leave the floor ; then with the arms in stretch position stretching of legs, whereby the back (chest) leaves the bars and the thighs are pressed backward. Change several times of knee bending position and span-bend-standing.
10. In cross-stand (3 feet from apparatus and left side toward it) : Arm raising sideward-up-

ward and trunk bending left sideward with ulnar grasp at double arm length ; high leg flinging right sideward, whereby the left foot rests slightly on floor.

11. From cross-stand : Side-leaning-rest with rest of left hand on floor or lower bar and ulnar grasping of right hand over head ; leg raising right sideward.
12. From side-stand backward : Front-leaning-rest with feet on bars ; traveling backward on hands with short jumps and traveling with feet to higher bars to slight hand-stand.

FIFTEENTH YEAR

1. In cross-stand with grasp of inner hand on one bar:
   (*a*) Leg raising left backward with leg lowering forward to balance standing position (body horizontal).
   (*b*) As in *a* with knee bending right.
   (*c*) Leg raising left forward with deep knee bending right.
2. In side-stand forward with left foot on bar and bend position of arms : Trunk lowering backward:
   (*a*) Arm stretching upward.
   (*b*) Trunk turning left.

3. In span-bend position with grasp on one bar (see exercise 8 *b*, p. 137).
   (*a*) Leg raising left forward.
   (*b*) As in *a* with heel raising right.
4. In span-bend position kneeling : Slight raising of knees.
5. In bent-hang forward on upper bar : Arm stretching to hang, also with lower leg raising.
6. In side-hang backward on upper bar :
   (*a*) Knee raising and leg stretching forward.
   (*b*) Leg raising forward and knee raising.
   (*c*) Leg raising forward, then opening and closing of legs.
   (*d*) Stand on one bar and change of stand and span-bend-standing position.
7. In side-stand backward and left foot on bar and bend position forward (upward) of arms : Fall-out backward forward with trunk lowering forward.
   (*a*) Arm stretching sideward (from arm bending forward position).
   (*b*) Arm stretching upward (from upward bend position).
   (*c*) Trunk turning left.
   (*d*) Trunk bending forward in change with lowering.
8. In span-bend-standing position (see exercise 9, p. 234): Leg raising left forward, also with heel raising right.

9. From side-stand backward : Front-leaning-rest with feet on bars.
   (*a*) Raising of left arm sideward (forward-upward).
   (*b*) Leg raising left backward.
   (*c*) Arm bending.
10. In cross-stand (3 feet from apparatus and left side toward it) : Arm raising sideward-upward and trunk bending left sideward with ulnar grasp at double arm length (or more) ; leg raising right sideward (a comrade supports the raised leg) ; leg raising left to flag position.

Long Bench (Swiss Boom)

THIRTEENTH YEAR

A. Balance Exercises

(*On reverse bench (boom) or on balance beams.*)

1. In front-step position left : Deep knee bending.
2. Walking with alternate knee bending and stretching (gradually deeper and finally to deep knee bending of standing leg).

B. Jump over the Obliquely Placed Benches

Four pupils stand in side-stand on lower end of four obliquely placed benches ; at command they jump with closed feet over the lowest place

of the set, make a turn and repeat jump with closed feet about one yard from the lowest end (toward higher end) ; meantime the following four pupils do the first jump, all make half turn and execute the following jump, etc.

C. Essential Exercises on Bench (Boom)

3. In straddle-mount on bench :
   (*a*) Trunk stooping forward (bending backward) ; arm raising (bending and stretching).
   (*b*) Trunk bending left sideward ; arm exercises as in *a*.
4. In front-leaning-rest with rest of hands on bench :
   (*a*) Raising of left arm sideward (forward-upward).
   (*b*) Leg raising left backward.
5. In side-leaning-rest with rest of left hand on bench :
   (*a*) Raising of right arm sideward (sideward-upward).
   (*b*) Leg raising right sideward.
6. In back-leaning-rest with rest of hands on bench : Leg raising left forward.

D. Long Bench and Stall Bars

If no stall bars are available, a comrade can hold fast the feet of the performing pupil, or the

feet can be leaned against another bench or the lowered boom.

7. In side-mount on bench with grasp of front edge and feet on lower bar : Trunk lowering backward (Fig. 98). (Trunk stays stretched and is lowered backward. The lowering, in the start moderate only, is gradually extended and finally performed so deep that the head reaches the floor.)

FIG. 98.

8. As in 7, then trunk turning left.
9. Lying forward on bench, but only on thighs, not on abdomen ; hands resting on floor, feet on bars, or held by a comrade : Stretching of body with hands on hips.

FOURTEENTH YEAR

A. Balance Exercises

1. Walking on higher (horizontal) benches.
2. As in 1 and exercises as provided for Course II.

B. Jump Over the Obliquely Placed Benches

(As in thirteenth year.)

C. Essential Exercises on Bench (Boom)

3. In straddle-mount on bench: Trunk turning left.
4. In front-leaning-rest with rest of hands on bench: Leg raising left backward with raising of right arm sideward (forward-upward).
5. In front-leaning-rest with rest of hands on bench: Leg raising right sideward with raising of right arm sideward-upward.
6. In front-leaning-rest with rest of hands on floor and feet on bench: Arm and leg raising as in exercise 4.
7. In side-mount on bench with grasp of front edge and feet on lower bar (exercise 7, p. 239); trunk lowering backward:
   (*a*) Head twisting left.
   (*b*) Arm raising forward upward and lowering backward until the index fingers touch the floor, chest raised as high as possible.
8. Lying forward on bench with rest of hands on floor and feet on bars (exercise 9, p. 239); stretching of body with arm bending (Fig. 99, p. 242) (arm bending forward; to neck-rest position).
9. As in 8, then head twisting left.

FIFTEENTH YEAR

A. Balance Exercises

1. Walking upward and downward on inclined bench.
2. As in 1 with suitable exercises as provided for Course II.

B. Jump over Obliquely Arranged Benches

(As in thirteenth year.)

C. Essential Exercises on Bench (Boom)

3. In straddle-mount on bench: Trunk turning left with trunk stooping forward.
4. In front-leaning-rest with rest of hands on bench: Arm bending.
5. In front-leaning-rest with rest of hands on floor and feet on bench: Arm bending.
6. In side-leaning-rest with rest of right hand on floor and right foot on bench: Leg raising sideward.

D. Long Bench and Stall Bars

7. In side-mount on bench with grasp of front edge and feet on lower bar (exercise 7, p. 239): Trunk lowering backward; hands on hips (arm bending to neck-rest, change of arm positions).

8. In lying forward on bench with rest of hands on floor and feet on bars (exercise 9, p. 239); stretching of body with arm raising forward upward (change of upward and sideward position of arms).
9. As in 8 with hand on hips (arm bending to neck-rest position) ; trunk turning left.
10. As in 8 but similar to span-bend position (upper body above chest raised) and arm

FIG. 99.

position as in 8 and 9, also trunk lowering forward, until front touches floor in change with the first position (Fig. 99).

E. ATHLETICS

1. JUMPING

A. SCHOOLING

(*a*) *Broad jump.*

1. From stand with feet together, 36–44 inches.

2. With starting run of two to three steps and take-off left, 48–72 inches.

3. Twenty feet starting run and free take-off, 72–88 inches.

4. Forty feet starting run and free take-off, 80–100 inches.

(*b*) *High jump.*

1. From stand with closed feet, 20 inches.

2. From stand with short jump forward, 20–24 inches.

3. One step start : Hop and jump with feet together, 20–24 inches.

4. Two to three running steps, take-off left, 20–28 inches.

5. Twenty feet run with free take-off, 24–32 inches.

6. Running broad-high 33 feet run and free take-off, $\frac{24}{48}$–$\frac{28}{56}$ inches.

(*c*) *Swiss storm board* placed on horizontal bar or boom, beginning with 4 feet and increase height gradually.

1. Run to take-off, turn around, and run back to stand.

2. Run to take-off, stop in fall-out position, and jump forward, also broad jump.

3. Run to take-off and immediate jump forward.

4. As in 3, but with only twice stepping on board.

To avoid accidents it is necessary to inspect and watch closely the jumping apparatus. Each lesson should begin with jumps of moderate height, and then gradually increase the requirement.

(*d*) *Buck.* Height in beginning 32 inches.

1. Straddling over buck in cross position.
2. The same over buck in side position.
3. Jump to momentary squatting-stand on buck in cross position and jump forward.
4. Squatting-vault over buck in cross position. (Attention! Stand in aid to the performer!)

B. APPLIED RUNNING

For broad, high, and deep jump the same exercises may be used as in Course II, with increase of width and height. Added thereto, are :

(*a*) *Hurdle jump* over bar or hurdle (take-off from one foot and land on the other).

(*b*) *Rest-jump* over a barrier, boom, or board from stand or running :

1. Flank-vault with momentary rest of the outer foot.
2. Flank-vault.
3. Rear-vault with momentary rest of the advance swinging foot (combined grip).
4. Rear-vault.
5. Straddle-vault over comrade.

(*c*) *Succession of different jumps.* To give the boys an opportunity to exercise a variety of jumps, a series of obstacles are placed in the gymnasium or on the athletic ground. For example:

1. Swedish bench or balance beam in inclined position: High-jump.
2. Two mattresses in a given distance apart, jump from one to the other : Ditch-jump.
3. Swiss storm board on side horse or horizontal bar: Deep-jump.
4. Swiss boom : Jump to mount the boom and deep-jump.
5. Horse without pommels in cross position : Rest-jump, flank-vault.
6. Buck in cross position : Straddle- or squatting-vault.

The following arrangement is an example of a hurdle track for jumping, climbing, " traveling," balancing and mounting.

1. Buck in low height: Free jump.
2. Climbing apparatus with vertical and inclined poles : Climbing upward on one vertical pole, " traveling " sideward and downward (without using legs) on two inclined poles.
3. Balance beams: Walking forward.
4. Several horizontal bars on rack : As-

cending, stepping over, descending, and deep-jump.

5. Swiss boom: Flank-vault.

2. Running

Endurance run and sprint (dash) race of Course II, with increased requirements.

Obstacle race over balance beams, tree trunks, beams, boards, ditches, slopes up and down, under parallel bars and low-stretched rope. The obstacles are cleared by alighting on one foot.

Relay race of Course II to be played so that in parties equally strong the first runner, after placing the balls, taps the second to gather them, and the second after gathering, taps the third to renew the placing. The return of the last runner to the starting line is announced by stretching arms upward of the whole party.

Flag relay race is similar to the number race, but the first runners carry a small flag (stick, gymnasium shoe) which, after finishing the run, they hand over to next run number. The last runner announces his return by raising the flag over head.

Courier race in zig-zag (Fig. 100). The class is divided in 2 to 4 equal parties, each of which subdivides itself into halves, the one having the even numbers and the other the uneven numbers,

facing each other at a distance of 30 to 50 yards. The starting points are exactly marked by flags or stakes. No. 1 is ready, left hand on flag. The numbers 1 begin the race in carrying the flag (stick, gymnasium shoe, cap) to numbers 2, who take it to numbers 3, etc. Each pupil runs

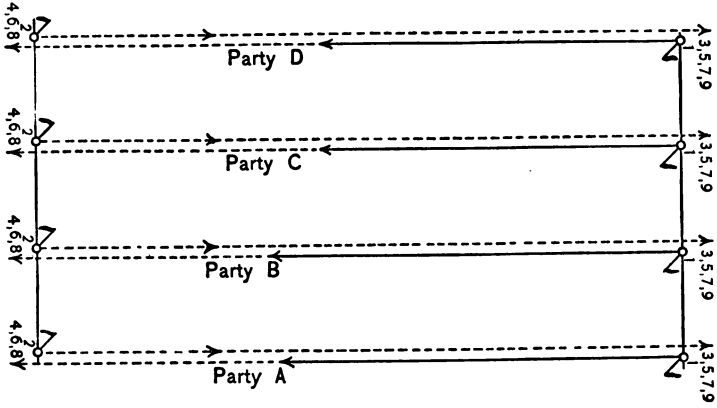


FIG. 100.

twice and returns to his starting place. (Last runner raises flag.) The pupils' attention must be called to the importance of a correct delivery of the flag and the improperness of too early a start.

Courier race in straight line. This running exercise is favorably combined with a hike. Distances and running time must be ascertained. Intervals may be taken while marching by step-

ping out of one or two runners at a given number of steps (120 paces equal 100 yards). Good results are obtained by forming two columns, each one taking position on one side of the road.

3. Throwing

A. Exercises with the small ball

Repetition of throwing and catching of Course II. Catching with one hand, right and left, should be required. Pitching, as a rule, is to be head high. Catching with one hand of a long throw demands a sharp eye and a ready hand ; it fascinates by daily increasing cleverness and superiority and should be acquired by all pupils of higher grades.

B. Exercises with the larger ball

Repetition of throwing and catching as in Course II. Distance throwing may be practiced as exercise for individual pupils.

Throwing of the sling ball (Fig. 101, p. 249) *and catching.* Handle or sling permits a much stronger throw. Three or four fingers do the grasping. A timely release of this grip is the main requirement for a successful throw. If the fingers release the grip too early, the flight of the ball will lack distance or make the ball roll ;

if too late, the throw will be too high and cause the ball to fly vertically or even backward. If the release of all the fingers does not take place simultaneously, the ball will fly in an oblique direction.

Fig. 101.

The throwing is to be practiced first from fore- and rear-swinging, later from arm circling. Other forms of throwing are :

(*a*) The thrower takes fall-out forward, face about, on throwing line, reaches over shoulder to throw, which he performs with half turn.

(*b*) Circling of arm in front of body is followed by circling in rear (circling in Fig. 8).

(*c*) The actual throwing is preceded by a starting run (best some form of a change-step-hop) and arm circling.

The sling-ball throwing is suitable for contests of single throwers. Width of zone for scoring balls 40–50 feet.

4. Pulling and Pushing

Repetition from Course II.

For other exercises the pupils are pitted against each other in pairs.

Single pole pushing. Contestants facing each other, grasp end of pole, 6 feet long and 2 inches thick, and brace themselves. Object : To push the opponent out of position.

Double pole pushing. Contestants between the two poles, facing each other ; the poles are placed under the arms close to the arm pits, ends projecting. Object : To push the opponent out of position.

Double pole pulling. Contestants between the two poles back to back. Object : To pull the opponent out of position.

Tug of war. See Course II, also *One-armed tug :* Contestants pulling with one arm only. The same with facing outward, and pulling rope over shoulder.

Tug of war with running race. The two parties face each other 10–15 yards from end of rope (in right angle to rope) and run toward it for the contest. The best runner of each party is placed in the continuation line opposite the end of the rope and runs to the end of same, grasping it and tugging while the others take hold in front of him. The running distance should not be too long, as the fastest runner would succeed in getting the whole rope in his possession, thereby preventing the main exercise of the tug of war.

5. Lifting and Throwing the Weight

LIFTING OF HORIZONTAL BARS

Repetitions from Course II, also with more weight : 3–4 pupils in flank line between two bars : Grasping both bars and

(*a*) 1. Lifting to side-position ;
2. Arm bending (bar on shoulder) ;
3. Arm stretching to side-position ; arm lowering.
The second and third exercise repeated.

(*b*) As in *a* with lifting to upward position in first and third time.

(*c*) 1. Lifting left to upward position ;
2. Arm bending left and right (bars on shoulders) ;
3. Lifting right and lowering left ;
4. As in 2, etc., until 8 lowering right.

(*d*) Lifting and lowering always through sideward position :
1. Lifting left to upward position ;
2. Lowering left to downward position and lifting right to upward position ;
3. Lifting left and lowering right, etc.

LIFTING OF IRON RODS

Repetitions from Course II with increase of weight.

LIFTING OF STONES

They should not be over 13–18 pounds. It is much preferable to lift lighter weights often than heavy ones only once or twice.

6. CLIMBING.
7. SWIMMING. } See Course II.

8. EXAMPLES FOR CONTESTS

Proficiency in athletic exercises is much easier judged than in other groups of gymnastics. The omission of apparatus and the open air for their performance make such exercises suitable for hikes, picnics, and other school events ; contests for classes and teams are in the fore-ground, but contests for individual pupils may also be held.

(*a*) *Sprint* (dash) of the whole class. The best runner to get 10 points ; the tenth one point.
Broad jump. The best performer gets 10 points ; the tenth one point.
Throwing the large ball. The best thrower receives 10 points ; the tenth one point.
The pupil with the highest number of points is the winner.

(*b*) *Sprint.* The ten best runners meet in:
High jump. The two best ones in this contest decide the winner by a *tug of war.*

9. Examples for Gymnastic Lessons in the Field

A. 1. Marching exercises in a road or street, leveled off ground.

2. Endurance run (3–5 minutes).

3. Open marching column and free-standing exercises.

4. High jump to top of a slope and deep jump from it.

5. Catch and pull tug of war.

6. Game.

B. 1. Marching.

2. Broad jump (ditch).

3. Free-standing exercises.

4. Hurdle race (slope, piles of stones, trunk of trees, etc.).

5. Climbing (woods).

6. Game.

C. Exercises for winter time.

Body exercises for the winter may occasionally take the place of methodical gymnastics. The teacher should keep all the pupils occupied so that they do not catch cold by standing around idle. It is entirely up to the teacher to arrange such a lesson, and a careful study of the following exercises is recommended:

(*a*) Exercises without apparatus.

1. Throwing snowballs:
   (*a*) distance throwing;
   (*b*) high throw; at a mark or object; over a mark (with left and right hand).
2. Rolling snow:
   (*a*) in free style;
   (*b*) as a contest. Divide in groups and ascertain which group makes the largest ball or rolls it the farthest in 5 or 10 minutes.
3. Jump over snowballs.
4. Piling up snowballs. Storming to top and deep jump.

(*b*) Sleighing and walking on snowshoes (barrel staves);

(*c*) Skating.

1. Falling in line on the different sides of the ice field (in one rank or two).
2. In column of two or four: Skating in beats.
3. Skating in front line (beginning with hands joined).
4. Turn of front line.
5. Change from line to marching column and reverse by turning in pairs, right by twos, and right front into line.
6. Running in single flank line (zig-zag or circle).

7. Running in pairs (one pupil forward, the other backward).
8. Running race:
   (*a*) individual;
   (*b*) in chains of 2, 3, 4 pupils.
9. Short broad jumps (feet together).
10. Games, played while skating.

10. Hikes

Once in a while it is advisable to have a hike take the place of a gymnastic lesson. It develops ability and discipline in marching. An insertion of endurance runs may increase the proficiency of such performance. If abundant time is available for a hike (two hours or a half a day), the time for rest (exactly regulated) may be used for determination of places and points (on map), to estimate distances, and to measure such by steps. Courier race, war games, as, for instance, protection of the march, covering, or ambush, scouting and storming a position, are fascinating additions to a hike. Endurance, alertness, cheerfulness, and love of nature are the result of hikes. Good songs ought to gladden the occasion, and the pupils should become accustomed to simplicity.

11. Games in the Field

(a) *War Game between Fugitives and Pursuers*

This game is especially adapted for the woods. The place should not be too limited, but bordered by roads, ditches, walls, etc. The players, the number of whom should not be under 15 to 20, separate themselves into two parties, into *fugitives* and *pursuers*, each one selecting a captain. The pursuers, recognizable by a piece of cloth around the arm, build a fortified camp serving as a prison, while the fugitives escape and hide themselves. After 2 to 5 minutes the captain of the pursuers sends his party out to take the fugitives prisoners. A fugitive is taken after receiving three light taps from a pursuer, and must accompany the latter to the camp. To evade being taken prisoner, the fugitive may hide, climb trees, or may attempt to pin down or even tie the hands of the pursuer. The game is finished when all the fugitives are taken prisoners. If the captain of the fugitives is able, without being tapped, to sneak into the camp or to penetrate into it untapped, with the aid of several fugitives, all captives are set free and they escape anew. It is, therefore, necessary for the camp to have always a sufficiently strong garrison.

(*b*) *The Paper Chase*

(Fox and Rider)

Two fleet-footed boys, called foxes, recognizable by a special mark, well acquainted with the surroundings receive a small bag with shreds of paper as a "scent." The other boys play the rôle of pursuers ("riders"). At the start of the game the foxes are given a handicap of 15 minutes, and they are free to choose any direction ; but they should go across the fields, through the woods, over sticks and stones. While running, the one fox strews the shreds to indicate approximately the road they took, but not so thickly as to make the chase too easy for the riders. Then the wild hunt starts and once in a while, when the foxes are seen, the pursuers give vent to yells. If they are caught before reaching their original starting point, the riders are the winners ; if the foxes reach the base first, the victory is theirs.

The hunt generally lasts a good while if the foxes succeed in misleading the pursuers. With a large class of pupils two to three hunts may be arranged at the same time. Different colors of paper shreds and special marks must be used for the different parties.

THE CLASSIFICATION OF THE PRINCIPAL EXERCISES OF THE SWISS SYSTEM OF GYMNASTICS IN REGARD TO PHYSIOLOGICAL EFFECTS

THE CLASSIFICATION OF THE PRINCIPAL EXERCISES OF THE SWISS SYSTEM OF GYMNASTICS IN REGARD TO PHYSIOLOGICAL EFFECTS

GROUP I

A. DRAINING EXERCISES (LEG)

They serve to regulate the circulation, and are used at the beginning of a lesson, after the arch-flexion and the trunk movements or, in any case where the blood vessels of the abdomen, chest, or head are congested.

Examples of Leg Movements:

(With and without arm exercises.)

Heel raising.

Knee bending.

Knee raising (leg stretching forward).

Walk and stride positions.

Hopping.

A number of these exercises are executed with grasp on the stall bars.

B. EXERCISES OF COÖRDINATION

They consist of almost unlimited sequences and combinations of arm and leg exercises ; also

in apparatus work, especially on the horizontal and parallel bars.

Group II

A. EXERCISES FOR THE EXTENSION OF THE SPINAL COLUMN AND EXPANSION OF THE CHEST

Exercises of suspension.

B. EXERCISES FOR THE EXTENSION OF THE SPINAL COLUMN AND THE UPPER PART OF THE CHEST

(*a*) Trunk bending backward.
(*b*) Trunk bending backward at stall bars.
(*c*) Stretch-grasp, span-bend-standing, heel raising.

Group III

BALANCE EXERCISES

They make the body supple and lead to the correct equilibrium without great expenditure of strength. Exercises in standing position on one leg are essential here.

I. (*a*) Leg raising.
(*b*) Change of position of the legs.
(*c*) Knee raising.
(*d*) Knee raising and leg stretching.
(*e*) Heel raising and knee bending in the normal or any stride-standing position ; all of them with or without arm movements.

II. Exercises of walking or standing on the balance beam, reverse benches, or boom.

Group IV

EXERCISES OF POSTURE

The purpose of these exercises is to accustom and train pupils to good posture in standing, walking, and sitting, and to overcome all kinds of faulty positions during the period of growth either from negligence or feeble constitution. The exercises of this group are, therefore, of the greatest importance and are to be executed with the utmost precision and detail. They are to be found in every lesson and are chosen from the following subdivisions.

I. *Exercises for the Neck, Shoulders, and Back:*

The effects of these exercises are:

Upright position of the head.

Fixing of the shoulder blades.

Straightening of the spinal column and widening of the chest.

They give to the muscles of the shoulders and back greater strength and endurance, overcome and prevent "round-shouldered" posture.

(*a*) *For the neck:*

1. Normal position.
2. Head (turning) in the normal and other positions.

3. Maintenance of correct position of head in the fall-out position forward and in stoop (or prone) standing positions.

(*b*) *For the shoulders:*

1. Normal position.
2. All arm positions except " reach."
3. Change of position of the arms from side to upward position.
4. Arm bending from any arm position.
5. Arm stretching to side and upward.
6. Arm swinging forward ; upward from backward position.
7. Arm circles forward and backward.
8. Span-bending, and span-bend-standing.

(*c*) *For the back:*

1. Fall-out forward and lay-out backward.
2. Stoop (prone) standing in stride, normal, walk, or fall-out position forward (upright body) followed by trunk bending forward. Stoop standing against boom.
3. Trunk bending forward ; downward through stoop standing.
4. Trunk bending forward.
5. Forward lying on horizontal bar, horse, or buck, and lowering the body forward, with companion support.

Also on

Parallel bars
Stall bars
Bench
} Foot grasp on apparatus.

6. Prone-stand-hanging on
- Horizontal bar.
- Parallel bars.
- Climbing poles.

II. *Exercises for the Frontal Part of the Body:* (Especially the abdominal muscles).

They strengthen the abdominal wall, prevent pendulous abdomen as well as "hump back." They also have direct effect on the organs, which, by a strongly developed wall of muscles, are protected against injuries resulting from blows and thrusts from the outside. Here we name the exercises:

(*a*) Fall-out position backward and lay-out position forward.

(*b*) Knee raising:

1. As free standing;
2. On climbing poles, especially in the form of climbing;
3. On horizontal bar;
4. On stall bars.

(*c*) Leg raising and leg stretching forward:

1. As free standing;
2. On horizontal bar;
3. On stall bars.

(*d*) Knee raising and leg stretching forward:

1. As free standing;
2. On horizontal bar;
3. On stall bars.

(*e*) Leaning-rest (stoop fall position):

1. As free standing;
2. On long horse;
3. On parallel bars;
4. On stall bars;
5. On long bench.

Fall-hang position on horizontal bar and boom. Trunk bending backward, leaning against boom.

Stall bars: Span-bend-standing. Span-bending in kneeling position.

Trunk lowering backward.

1. On side horse, leaning against apparatus or in mount position;
2. On parallel bars;
3. On stall bars;
4. On (long) bench.

III. *Exercises for Both Sides of the Body:*

They bring about a symmetrical development of the body and for this they must be executed left and right. Besides strengthening the inter-costal muscles they have the same effect on the *lateral abdominal muscles*

as well as on the long dorsal extensors. The following are exercises of this type:

(*a*) Lay-out and fall-out positions sideward.

(*b*) Leaning-rest positions:

1. As free standing;
2. On stall bars;
3. On (long) bench.

(*c*) Side-fall-hang on horizontal bar or beam.

(*d*) Trunk turnings:

1. As free standing;
2. On long bench.

(*e*) Trunk bending sideward:

1. As free standing;
2. With leaning against boom;
3. On stall bars;
4. On long bench.

(*f*) Trunk lowering sideward:

1. On the boom (leaning against);
2. On stall bars.

Group V

RESPIRATORY EXERCISES

The *aim* of these exercises is the fullest development of the *respiratory system.* They impel the respiratory organs to stronger and more intense work ; they regulate too hasty and superficial respiration ; they bring about slower and deeper

respiration, and thus a more complete exhalation. By a false inhalation the abdomen is drawn in, while by a correct inhalation the start is at the diaphragm and is transferred to the flanks, thence to the region of the sternum, ending with the activity of the pulmonary parts next to the clavicles. The decending diaphragm presses the viscera against the abdominal wall ; thus, the inhalation is only perfect when the abdominal wall is slightly convex.

The respiratory exercises are of great importance when by the preceding exercises a further supply of oxygen is necessary, as after running.

A deep exhalation increases the volume of air going out and with it a greater amount of carbon dioxide (CO_2) and water. That way some of the most troublesome elements of excretion are being eliminated with greater rapidity, and waste matter is being eliminated in greater quantities. The accumulation of CO_2 is one of the chief causes of fatigue, and, if this is removed at a more rapid rate, it is evident that the period of work can be lengthened proportionately.

Through convenient movements which alternately bring about expansion and contraction of the chest, we can gradually deepen the respiration and maintain a desirable rhythm.

Movements:

Arm raising sideward and lowering.
Arm raising forward and upward.
Arm raising sideward and upward.
Carrying the arms sideward from " reach."
Arm bending from "reach" and arm stretching.
Arm circles forward and backward.
Heel raising and deep knee bending also with convenient arm movements.
Trunk bending backward.
Trunk bending forward, and stretching.

SWIMMING

SWIMMING [1]

1. Arrangements for the instruction in swimming must be determined by the facilities existing.

Where there is sufficient depth of water and available docks, swimming platforms can be readily erected. These platforms, which may be built in sections so that they can be removed after the swimming season, should project not less than 4 feet beyond the edge of the dock, and the distance from the platform floor to the surface of the water should not be less than 30 inches. The length of the platform will depend upon the available space and the number of pupils to be instructed. A space of 4 by 12 feet should be allowed for each pupil.

Uprights of 4 by 4 stuff, projecting 8 feet above the platform and carrying a crosspiece sufficiently long to project at least a foot beyond the outer edge of the platform, should be erected at intervals of 12 feet. These uprights, with their crosspieces, provide the support for the swimmer and they must, therefore, be securely bolted to the face

NOTE: This instruction is taken from the *Manual of Physical Training for the United States Army.*

of the dock and to the sleepers of the platform; and the crosspiece, which has a swivel pulley large enough to take the swimming rope attached to the outer end, must be braced against the upright. Ladders leading to the platform from the water should be placed where they will not be in the way.

2. Where it is impracticable to build the platform described above, the uprights alone will answer the purpose of instructing the pupils in the stroke, swimming poles being used when the pupil is able to propel himself.

3. The simplest device, in connection with giving this instruction from the dock, consists in erecting an upright about 42 inches high close to the edge of the dock, and using it as a fulcrum for the swimming pole, the pupil being suspended from a rope attached to the end of the pole.

4. When no docks are available, platforms along the lines described under 1 may be erected in the water on piles or, when this is impracticable, floats with raised platforms and uprights may be substituted.

5. In the absence of any facilities, but where the character of the water and the bottom is such as to make it possible, the pupils must be instructed to assist one another. This is done by standing in water of sufficient depth and holding the one to be instructed in the proper position by placing

the left hand under his chin and the right hand between his shoulder blades and assuming a position that will not interfere with the swimmer's movements.

Belts

6. These are 3 inches wide, made of canvas, padded on the inside with hair and bound and faced with some soft material that will not irritate the skin. The length should be great enough to bring the ends of the belt to within 4 inches of meeting in the back.

On the outside of the belt three $\frac{3}{4}$-inch iron rings are securely sewed to it at regular intervals, while at each end of the belt there is a larger ring 1 inch in diameter.

Ropes

7. A half-inch cotton rope should be used ; for beginners 15 feet will be found ample, while 30 feet should be used for those preparing to qualify.

Ropes and Belts

8. The rope should be fastened in the following manner : Tie the end of the rope securely to the small ring, 1, nearest the larger one, A : pass it through the other two small rings, 2 and 3, and through the two larger ones, B and A ; then

through B, forward, and then halfway between A and B, where it is looped and passed under. (Plate A.)

The advantage of this arrangement is its safety, the rope cannot become untied ; it is readily adjusted ; all that is necessary is to loosen the loop and pull the ends of the belt apart ; once it

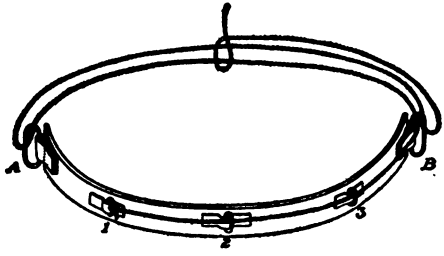


PLATE A.

is adjusted to the swimmer it remains fixed, there is no tightening due to slipping on account of the weight thrown upon it.

Poles

9. These should be of some tough, but light, material, 2 inches in diameter and from 8 to 10 feet long. At one end a swivel pulley is attached through which the swimming rope is run.

In the absence of projecting swimming platforms, beginners are suspended from the end of

these poles resting on the upright fulcrum described under 3, until they have acquired the stroke. When they begin to make progress and are propelling themselves, the instructor carries the pole in his hands with the end projecting far enough over the edge of the dock to give the swimmer sufficient space to move in without coming in contact with the dock.

INSTRUCTION

THE BREAST STROKE

10. This stroke having for many years been found the best adapted for military purposes, has been adopted by all armies in which the instruction in swimming is made compulsory.

It is the basis upon which all other methods of progression in the water are founded, and those who acquire proficiency in its use, develop coordination to such a degree that they have no difficulty whatever in acquiring any other stroke, no matter how complicated.

The character of the movements comprising this stroke bring into play such a great variety of muscle groups, all in accordance with their natural functions and with such an equal distribution of effort, that aside from its usefulness

this stroke has an incomparable value as an agent for all-round development.

Water Instruction

11. The belt having been adjusted, which is done by slipping it over the head of the pupil and securing it well up under his arms, being careful not to have it so tight that it will bind his movements or restrict his respiration, and being careful also that the loop of the rope is squarely between the shoulder blades, the pupil is prepared to leap into the water. This should always be insisted upon, since, while it appears drastic, it is most efficacious in overcoming the fear of the water so common amongst boys who have not learned how to swim.

The pupil, having been cautioned not to gasp or open his mouth when he strikes the water and not to throw his arms about wildly, but to *open his eyes* and to *keep cool*, leaps from the platform at the command *Jump*, which is executed with the feet striking the water first, legs together and extended, trunk erect, and arms at sides.

After reaching the surface, in which he is assisted by the instructor, he will assume the following position:

The body, chest down, is fully extended horizontally; the head is bent back; the arms, with

fingers extended and closed and thumbs together and palms down, are stretched to the front, hands just under the surface ; the legs, with knees straight, are closed and extended horizontally to the rear ; the heels are together, the feet are turned out at an angle of about 60°, and the toes are turned up perpendicular to the surface. (Fig. 102.)

In assuming this position care should be taken to

Fig. 102.

avoid any tendency toward rigidity; the muscles are stretched, not contracted.

In this position the instructor commands : 1. ***Arm Stroke***, 2. ***ONE***, 3. ***TWO***, 4. ***THREE***.

At *one*, the arms fully stretched, palms down, are moved sideward horizontally, in a circular motion of greatest possible radius until they are in a line with the shoulders.

At *two*, the elbows are flexed until the upper arms touch and are parallel to the chest ; the forearms, palms still turned down, continue the motion until the thumbs are brought together directly under the chin.

At *three*, the arms are stretched forward to the original position (Fig. 102).

In the beginning a pause should be made in every position to insure accuracy ; when that has been attained the arm stroke is executed in one continuous movement in the following manner :

At *o-n-e* (drawn out to indicate the character of the movement, which is comparatively slow), the arms are brought in line with the shoulders, as described before ; the moment that movement is about to be completed the command *and — two* is given, briskly followed by the command *three.* At *and — two,* the arms are drawn to the body and extended forward, in a continuous movement ; and at *three,* the arms pause in the first position.

The cadence indicated here is the regular swimming cadence, the first count requiring as much time as the others combined.

The legs may be relaxed while the arms are being exercised.

Proper breathing is always a source of considerable annoyance to beginners, and instructors cannot begin too early to teach how and when to inhale and to exhale. This should be done when the arm stroke is taught and insisted upon throughout the instruction until respiration is carried on naturally. The inhalation occurs while the arms are being moved outward and sideward, and the exhalation follows immediately after their

extension. In quiet water this breathing may be carried on through the nostrils, but in rough water or where there is a tendency to choke because of water entering the nostrils, mouth breathing must be resorted to.

When the arm movements are understood and accurately performed, the instructor will command: 1. ***Leg Stroke,*** 2. ***ONE,*** 3. ***TWO,*** 4. ***THREE.***

The arms are held in the forward position without constraint.

At *one,* the legs and thighs are flexed on the body by drawing the knees under it until the thighs are slightly beyond the perpendicular and the legs horizontal; the heels remain together, the toes turned out and up, but the knees are separated, being in line with the feet.

At *two,* the legs are quickly and fully extended in as wide a straddle as possible with an outward and backward motion, the soles of the feet being forced against the water.

At *three,* the legs remaining fully extended, are brought together briskly to the first position.

As in the arm stroke, a pause should be made in each position to insure accuracy, and when that has been accomplished, the leg movement should be blended into one continuous motion as follows:

At *one*, the legs remain in the first position ; and at *and*, they are drawn up as described above, the movement being executed quietly and without force in order to avoid offering too much resistance to the water ; just as the legs reach the prescribed position the commands *two* and *three* are given briskly and in quick succession, indicating that the completion of sideward movement is followed instantly by the closing of the legs.

When these movements are thoroughly understood and correctly carried out, the arm and leg movements are combined and executed at the command : 1. ***Stroke***, 2. ***ONE***, 3. ***AND TWO***, 4. ***THREE***.

At *one*, the arms begin the sideward movement, the legs remaining in the first position.

At *and*, the arms are drawn in to the body and the knees are brought up (Fig. 103).

At *two*, the arms are extended forward and the legs sideward (Fig. 104) ; and at *three*, the legs are closed, while the arms remain in the first position (Fig. 102).

Until the pupil has learned to coördinate and to grasp what is required of him, it is advisable to pause in each position ; when he has succeeded in doing this the stroke is given in the proper swimming cadence, the arm movements beginning at *one* and ceasing at *two* and pausing at

three ; while the legs remain motionless in the first position at *one,* but begin at *and* and cease at *three;* a considerable pause should be made between strokes.

Fig. 103.

It is advisable to impress upon beginners that swimming with this stroke is not dependent upon excessive muscular exertion or rigidity, but that all extensions of the arms and legs are reaches rather than thrusts, and that the body must be relaxed as much as possible.

Since there is no danger of the body sinking while it is moving, too much stress can hardly be

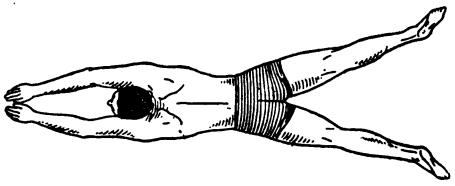


Fig. 104.

laid upon the importance of the pause between strokes, which in the case of even ordinary swimmers should be equal to the length of time it takes to complete the stroke, while in powerful swimmers this pause is from three to four times the duration of each stroke, a husbanding of muscular energy which makes it possible to swim long distances without becoming exhausted.

The pupils must also be given to understand the *legs furnish the entire propelling power* in which the closing of the legs after the extension is equally as valuable as the extension itself. The arms, for ordinary purposes, are used merely for the purpose of buoying up the head, not for the purpose of propulsion, and for that reason they are held and moved in a position that has the advantage of being the most natural, the least fatiguing, and that offers the least resistance to the water. Thus the entire burden of the effort devolves upon those members of the body upon which this burden is imposed upon the land, *the legs*, and not upon those members which nature never intended for such a purpose, *the arms*. It is due entirely to this natural and equable employment of those members that the breast stroke is used, without exception almost, by all long-distance swimmers when it is a question of endurance rather than of speed. For the latter purpose the hands may be turned with the palms out in the first motion, but this should be restricted to those who have qualified with the regular stroke, and who appreciate the value of the leg stroke.

When the pupil can execute the movements faultlessly and without the numbers, he is released from further instruction on the stationary

line and given instruction on a loose line. The belt, being adjusted as before, is attached to a line that is held in the hands of the instructor. The pupil now begins the stroke at one end of the platform and as he forces himself forward the instructor advances with him, having the rope taut and standing while the pupil is bringing his arms around and his knees up, and slightly slackening the rope and advancing a step as he extends.

In a short time he will begin to carry his own weight ; and, when he has learned to swim from 30 to 50 strokes, he should be made to swim on the arch of a circle whose radius should be constantly increased until he is able to swim several minutes. When he can do this he should be timed daily until he is able to swim for ten minutes, when he should be excused from further instruction, but encouraged to continue practice daily until he has gained confidence in himself and learned to keep himself afloat by other methods besides the breast stroke.

Common Faults

12. For the benefit of instructors, the faults and bad habits most common with beginners are enumerated here:

The tendency to arch the back in order to raise

In the beginning a pause should be made in every position to insure accuracy ; when that has been attained the arm stroke is executed in one continuous movement in the following manner :

At *o-n-e* (drawn out to indicate the character of the movement, which is comparatively slow), the arms are brought in line with the shoulders, as described before ; the moment that movement is about to be completed the command *and — two* is given, briskly followed by the command *three.* At *and — two,* the arms are drawn to the body and extended forward, in a continuous movement ; and at *three,* the arms pause in the first position.

The cadence indicated here is the regular swimming cadence, the first count requiring as much time as the others combined.

The legs may be relaxed while the arms are being exercised.

Proper breathing is always a source of considerable annoyance to beginners, and instructors cannot begin too early to teach how and when to inhale and to exhale. This should be done when the arm stroke is taught and insisted upon throughout the instruction until respiration is carried on naturally. The inhalation occurs while the arms are being moved outward and sideward, and the exhalation follows immediately after their

extension. In quiet water this breathing may be carried on through the nostrils, but in rough water or where there is a tendency to choke because of water entering the nostrils, mouth breathing must be resorted to.

When the arm movements are understood and accurately performed, the instructor will command: 1. ***Leg Stroke***, 2. ***ONE***, 3. ***TWO***, 4. ***THREE***.

The arms are held in the forward position without constraint.

At *one*, the legs and thighs are flexed on the body by drawing the knees under it until the thighs are slightly beyond the perpendicular and the legs horizontal; the heels remain together, the toes turned out and up, but the knees are separated, being in line with the feet.

At *two*, the legs are quickly and fully extended in as wide a straddle as possible with an outward and backward motion, the soles of the feet being forced against the water.

At *three*, the legs remaining fully extended, are brought together briskly to the first position.

As in the arm stroke, a pause should be made in each position to insure accuracy, and when that has been accomplished, the leg movement should be blended into one continuous motion as follows:

straint and the right arm stretched straight out under the head on prolongation of the body ; the left arm stretched downward over the left thigh with the hand just in rear of the body ; palms of both hands down (Fig. 105).

Fig. 106.

From this position the left forearm is brought up across the chest until the hand, palm down, is close to the chin ; the right arm in the meanwhile is pressed downward about 45°, when the

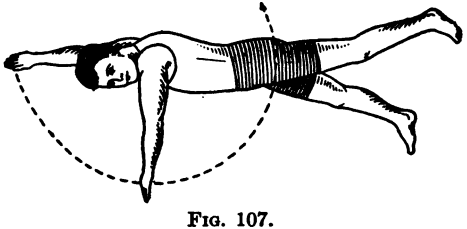


Fig. 107.

elbow is bent and drawn back under the chest until the hand, palm down, is as close as possible to the right shoulder. While the arms are executing these movements, the knees are drawn up precisely as they are in the breast stroke (Fig. 106). From this position the legs are extended and closed as in the breast stroke, except that they are not so far apart, and the arms are extended (Fig. 107), the right straight out under the head

to its original position and the left arm forward and then backward in as large a circular sweep as possible until it, too, reaches its original position (Fig. 105). After pausing, the length of the pause depending upon the carrying quality of the stroke, the movement is repeated.

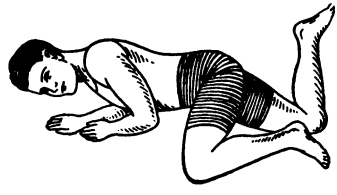


FIG. 108.

Variety may be given this stroke by the introduction of the "scissors kick," the upper leg being extended straight out to the front and the

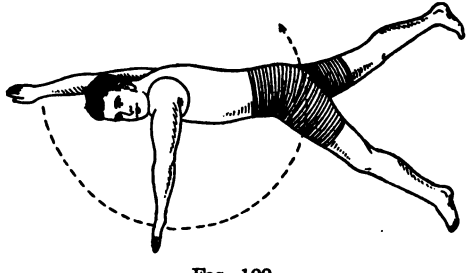


FIG. 109.

under leg to the rear, the legs being brought to the first position from there (Figs. 108 and 109).

BACK STROKE

14. As the body displaces more water when lying on the back than it does in any other posi-

tion, thus increasing its buoyancy, swimming with the back stroke is the most easily acquired of any stroke. Its greatest value lies in the fact that it affords an exhausted swimmer a chance to rest.

1. *With Legs*

The swimmer extends himself in the water, face upward, body and legs extended without constraint ; the head submerged to the ears and the arms lying close to the sides, palms down. In this position he executes the leg movements of the breast stroke, except that the knees are not drawn up as high and are separated more. Care should be taken not to move the hips while the knees are being drawn up and extended, because any motion of the hips will cause the head to be submerged.

2. *With Legs and Arms*

The position is the same as above. When the knees are being drawn up, the elbows are bent and raised until the upper arms are in line with the shoulders, and the hands, palms down, are close to the chest, as the knees are being extended and the legs closed, the arms are flung out sideward and brought down to the sides in a whip-like movement, the palms turned in.

3. *With Legs and Overhead Arm Stroke*

In this stroke the arms are raised forward and overhead, out of the water ; and as they enter the water beyond the head they are brought to the sides of the body with a strong horizontal movement, arms extended and palms down. The knees are drawn up just as the arms enter the water, and they are extended and closed while the arms are being brought to the sides.

TREADING WATER

15. The body is held in a perpendicular position and the knees are drawn up and extended downward alternately in quick succession, the hands assisting by pressing the water downward.

Treading water may also be done by executing the leg motions of the breast stroke in a modified form in quick succession. These movements should be practiced until the swimmer is able to raise his hands out of the water.

FLOATING

16. Floating is essential because it affords the swimmer the most complete rest in the water, thus giving him an opportunity to repair his strength.

In fresh water this means of sustaining the body

is possible only in exceptional cases; in salt water, however, the inability to float is the exception.

The swimmer lies in the water horizontally, face up, exerting himself just enough to keep his body, arms, and legs fully but not rigidly extended. The whole body, except the face and mouth, should be submerged. The legs may be kept closed or separated; the arms should be held away from the body, hands in the plane of the waist with the palms down; the lungs should be inflated and by short exhalations and proportionately longer inhalation, carried on through the mouth, they should be kept so as much as possible.

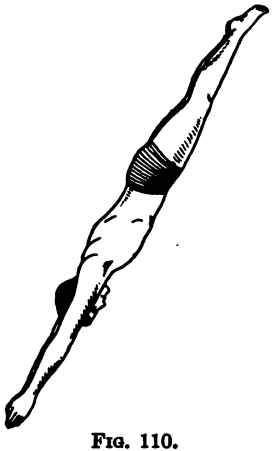


FIG. 110.

When difficulty is encountered in floating, a slight sculling movement of the hands, from the wrist, will often suffice to keep the body afloat.

If the legs should sink, they may be held flexed at the knees until they are at right angles to the thighs; or the body may be "dished" slightly; that is, bent slightly forward at the waist.

DIVING

17. This may be divided into the ordinary dive, in which the body enters the water at an angle of

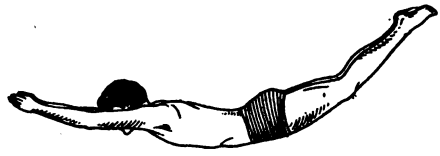


FIG. 111.

45° ; the perpendicular, or deep dive ; and the shallow dive, in which the body enters the water at an angle of about 30° (Figs. 110, 111, and 112).

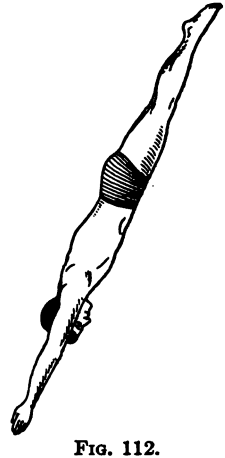


FIG. 112.

In preparing to dive the swimmer stands with his toes projecting beyond the edge of the platform and his arms stretched sideward. As he springs off, the arms are swung forward overhead, palms together ; the head is thrown forward between the arms and the legs are swung up until the body assumes the desired angle. Arms and legs must be extended and closed, feet depressed. The moment the body enters the water the eyes are opened, the arms and head pressed back, and

the legs relaxed ; this will cause the body to rise to the surface.

GENERAL HINTS

1. Swimming should not be indulged in immediately before or after meals, the best time being an hour before or from two to three hours after meals.

2. The water should not be entered when the body is over-heated or wet with perspiration ; cramps or other more serious discomforts are likely to result.

3. The body should be dried thoroughly and the water should be entered by plunging in head foremost, if practicable, or by leaping.

4. Pupils should be cautioned not to stand in the water to cool off, as doing so has an enervating effect.

5. While in the water the body should be kept in motion ; standing about after swimming is liable to cause chills.

6. When through swimming, the water should be quitted at once and the body dried and dressed promptly.

7. During instructions only those that are employed should leave the dressing rooms; when it is necessary to have more pupils than can be employed on the platform, those not employed should be made to wear blouses or other covering for the body.

8. When attacked by cramps the pupils should be instructed not to lose presence of mind, but to kick out more vigorously than ever if a leg is affected ; if an arm, they should turn over on the back and swim with the leg stroke, in the meantime rubbing the affected arm vigorously.

9. The undertaking of hazardous ventures for the sake of display, should meet the unqualified condemnation of those in charge of this instruction, since many fatalities are directly traceable to such foolhardiness.

10. Lack of confidence is never overcome by drastic measures or ridicule ; gentleness and perseverance will be found much more efficacious. Fearsomeness while in the water is usually not due to cowardliness but lack of confidence or to an inherent fear over which many who do not lack bravery in other things have no control.

11. Going to the assistance of a drowning person is at best a very precarious undertaking and should, therefore, be limited to those who are cool-headed and strong swimmers.

12. In approaching a person in danger extreme caution should be exercised lest he grab his would-be rescuer. The approach should be from the left and rear, leaving the right arm of the rescuer free for defensive purposes in case he should be clutched. The helpless man's upper arms should

be firmly gripped and he should be pulled over on his back, the rescuer, too, turning on his back and towing the other in by using the backstroke. The pupils should be instructed in this method, using each other as subjects.

13. In an extremity, when a rescuer finds his life is being endangered, he should not hesitate to resort to extreme measures of self-defense, such as striking with the fist between the eyes, choking, or submerging the head of him to whose rescue he has gone. Restoration to consciousness is readily accomplished, if unconsciousness has resulted from this treatment, once land has been reached.

RESTORATION OF THOSE APPARENTLY DEAD FROM DROWNING

As soon as the body has been recovered, resuscitation should, if the weather is not inclement, be attempted on the spot.

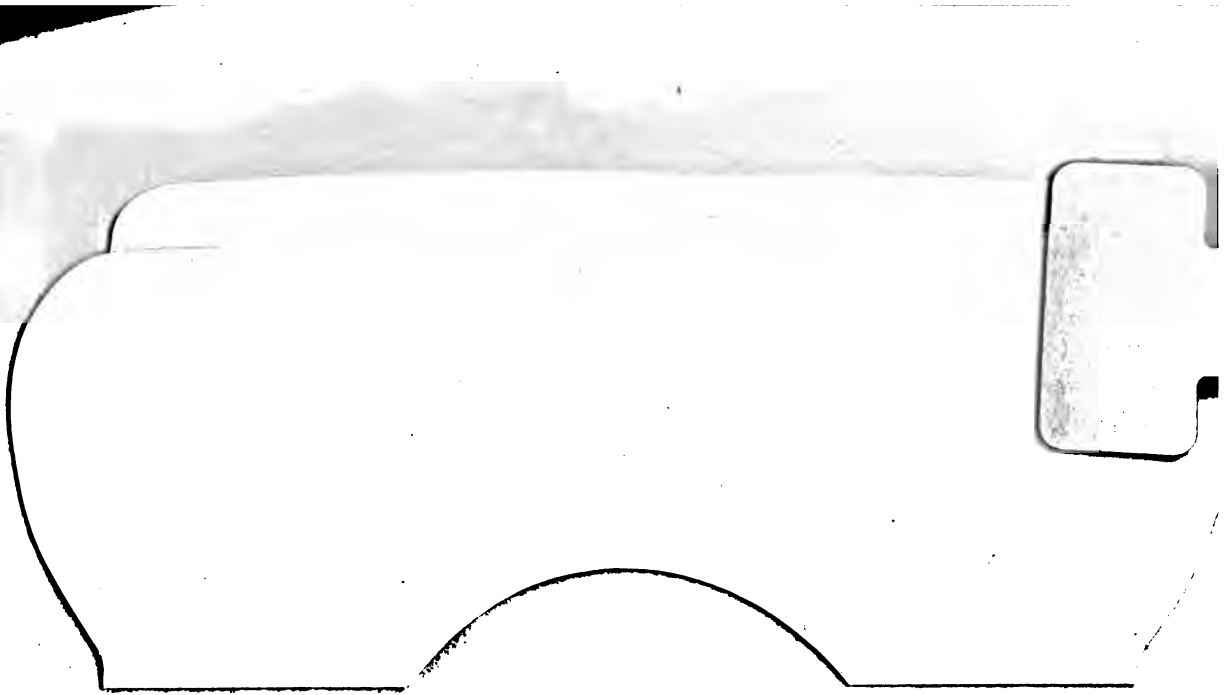
1. Remove all the clothing from the patient's chest.
2. Place him on the ground, face down, and grasp him under the abdomen and raise him up. This will give the water he swallowed an opportunity to escape and free the air passages.
3. Turn the patient over ; and, with a hand-

kerchief wrapped around the first finger, clean the mouth and nostrils.

4. *Draw out the tongue* and hold it in that position by an elastic band, string, tape, or a strip of cloth torn from a handkerchief ; or have an assistant hold it with his fingers wrapped in a handkerchief or cloth.
5. Use the following method of artificial respiration, which is known as the Sylvester method :

   Place the patient on his back and lay a roll of clothing, coat, or other garment under his shoulders. This roll of clothing must be large enough to raise the shoulders and throw the head slightly to the rear.
6. Kneel at his head and grasp his arms, one in each hand, with fingers out and thumb in, just below the elbows, and draw the arms outward, away from the chest, till they meet overhead. *This movement imitates inspiration.* The arms are then turned down and forcibly pressed against the chest for a moment. *This movement imitates expiration.* Continue these movements perseveringly at the rate of about 15 times per minute until signs of natural respiration are perceived.
7. While those movements are going on, the clothing remaining on the patient should be

removed by an assistant, without *interfering with the artifical respiration*, however. When the body is stripped it should be dried and covered with such clothing as may be available.

8. An attempt to produce natural respiration by exciting the respiratory nerves may also be made by holding ammonia to the nostrils, by slapping the chest alternately with cloths wrung out in hot and cold water, or by tickling the nostrils with a feather.
9. When breathing has been restored, the limbs of the patient should be rubbed upward, toward the heart, vigorously in order to restore the circulation. The rubbing should be done under the covering as much as possible ; and, in order to restore the warmth of the body, extra covering, hot flannels, bricks, or bottles should be applied.
10. To stimulate the vital organs, small doses of aromatic spirits of ammonia should be given.

Printed in the United States of America.